



**A University of Sussex PhD thesis**

Available online via Sussex Research Online:

<http://sro.sussex.ac.uk/>

This thesis is protected by copyright which belongs to the author.

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the Author

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the Author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given

Please visit Sussex Research Online for more information and further details

**University of Sussex**

**Carol Ann Hydes**

**Candidate for Doctor of Philosophy (DPhil)**

# **Italian Mosaic Art 1270 – 1529**

Submitted for the degree of Doctor of Philosophy

University of Sussex

February 2017

## Statement

---

I hereby confirm that this thesis, entitled “Italian Mosaic Art, 1270 – 1529”, has not been, and will not be, submitted in whole or in part to another University for the award of any other degree.

Signature.....

**Carol Ann Hydes**

**University of Sussex**

**Carol Ann Hydes: Candidate for Doctor of Philosophy (DPhil)**

# **Italian Mosaic Art, 1270 -1529**

## **Summary**

My thesis concerns the practice of mosaic art throughout Italy between the late Middle Ages and early Renaissance, a period long-studied for its painting, but rarely if ever for its mosaics.<sup>1</sup> It addresses the extent of the art form both numerically and geographically in a way not done before, and discusses its likely costliness and what is known about how mosaics were made and the artists who made them.

The first four chapters largely address these key issues by analysing the two databases that I constructed from primary and secondary sources. The first database counts and tracks the installation of wall and ceiling mosaics into Italian churches between 1270 and 1529. The second database enumerates the artists who made mosaics during the same period. The last two chapters of the thesis consider why some patrons chose to commission mosaics, but why many of them turned away from commissioning the medium. Whilst explaining the reasons for the decline in any art form is tricky, I argue that they were caused by the political, economic, religious, social and philosophical changes that happened in Italy, though the reasons often appear intertwined and specific to individual cities.

---

<sup>1</sup> The reasons for choosing the dates 1270 to 1529 are explained in the Introduction.



## Acknowledgements

I would particularly like to express my special gratitude to my supervisor Professor Liz James for her generous guidance, critical attention and encouragement at every stage of the work and since the thesis strayed into the Renaissance, to Professor Michelle O'Malley for her valuable advice.

I also owe a debt of gratitude to the staff of the University of Sussex Library for their prompt attention and success in acquiring texts, and the staff of the Warburg Library for their invaluable support.

Many Italian curators and guides in innumerable churches and museums right across Italy were extraordinarily helpful and I owe all of them very much gratitude, as well as friends to whom I turned for their specialist knowledge of religion, Latin and information technology. I am also grateful to Wendy Watson for words of wisdom and encouragement during the re-writing of this thesis.

But this study would never have been possible without the indulgence, patience and help during fieldwork and writing of my husband Owen Hydes and daughter, Ciaran Hydes. To them and Liz James, I dedicate this study.

## Contents

	<b>Page</b>
Statement	i
Summary	ii
Acknowledgements	iii
Contents	iv
List of Tables	vii
List of Figures	ix
List of Illustrations	x
Map: Political Context I: Italy circa 1300	xiii
Map: Political Context II: Italy circa 1500	xiv
Map: Italian cities where mosaics were installed between 1275 and 1529	xv
<b>Introduction</b>	<b>1</b>
The Importance of Mosaic	4
Parameters of the thesis	5
The databases	7
Methodology	8
Scholarly work on Italian Mosaics in the late Middle Ages and Renaissance	11
<b>Chapter 1: The Extent and Location of Mosaic Work in Italy, 1270 to 1529</b>	<b>17</b>
Introduction	17
Database of mosaic activity	17
The number of mosaics installed, 1270 to 1529	19
The three phases of mosaic activity	21
The balance of mosaic activity	24
Geographical trends	25
Conclusion	31
<b>Chapter 2: The Production of Mosaics</b>	<b>33</b>
Introduction	33
Technology and its links to the cost of mosaics and the time taken to produce them	34
Glass-making in Italy	34
Material for glass-making	36
Other resources	41
Furnaces	43
Colouring glass	45
The glass-makers	47
Making metallic tesserae	49
The process of setting tesserae	50

<b>Contents</b>	<b>Page</b>
The cost of mosaics	53
Conclusion	56
<b>Chapter 3: The Mosaicists</b>	<b>58</b>
Introduction	58
Definition of “mosaicist”	59
The meaning of “mosaic workshops”	60
Who became mosaicists?	63
Description of the database	65
Methodology for the construction of the database of mosaicists and workshops of mosaicists and tables from it.	66
Interpretation of the data in the tables	67
The demand for mosaicists in Italy	68
The demand for the services of mosaicists in five Italian cities	70
The work of mosaicists	73
The design of mosaics	75
Setting tesserae	78
The training of mosaicists	78
Repair work	80
The movement of mosaicists around Italy	82
Mosaicists and other media	86
The early sixteenth century	96
Conclusion	98
<b>Chapter 4: The Iconography of Mosaics</b>	<b>99</b>
Methodology	100
Iconographical changes	101
Architectural changes	102
Mosaics in apses	104
Mosaics on facades	107
Mosaics in other architectural positions	111
Influences on iconography	112
Other influences on iconography	114
Conclusion	125
<b>Chapter 5: Why did patrons choose mosaic art?</b>	<b>127</b>
Conclusion	144
<b>Chapter 6: The declining patronage of mosaics</b>	<b>145</b>
Conclusion	169
<b>Conclusion</b>	<b>171</b>
<b>Bibliography</b>	<b>176</b>

<b>Contents</b>	<b>Page</b>
<b>List of Appendices</b>	
<b>Appendix 1:</b> Tables from the database of Buildings where Mosaics were installed on Walls and Ceilings between 1270 and 1529	186
<b>Appendix 2:</b> Tables from the database of Mosaicists, 1270 – 1529	238
<b>Appendix 3:</b> Iconography of Mosaics: arranged and coloured by subject of mosaic	297
<b>Illustrations</b>	303

## List of Tables

<b>Chapter</b>	<b>Table No.</b>	<b>Title</b>	<b>Page No.</b>
Introduction	Table 1	Cities, towns and villages that formed the basis of the research	10
Chapter 1	Table 2	Locations of Towns/Cities/Regions in the database of mosaics	18
	Table 3	Summary of different forms of mosaic activity organised by city or region	20
	Table 4	Buildings with new mosaics and repairs to mosaics by decades from the 1270s to 1520s	22
Chapter 2	Table 5	Some sources of materials used in making glass for tesserae in Italy, 1270 to 1529	37
	Table 6	Other resources used for glass-making in Italy, 1270 to 1529	42
Chapter 3	Table 7	Locations in the database of mosaicists and workshops active between 1270 and 1529	66
	Table 8	Venice: men who worked only in mosaic and those who also worked in other media in the three periods 1270-1329, 1330-1449 and 1450-1529	88
	Table 9	Rome: men who worked only in mosaic and those who also worked in other media in the three periods 1270-1329, 1330-1449 and 1450-1529	89
	Table 10	Florence: men who worked only in mosaic and those who also worked in other media in the three periods 1270-1329, 1330-1449 and 1450-1529	91
Appendix 1	Table 11	Buildings in Arezzo with wall/ceiling mosaics	187
	Table 12	Buildings in Florence with wall/ceiling mosaics	188
	Table 13	Buildings in Lucca with wall/ceiling mosaics	201
	Table 14	Buildings in Orvieto with wall/ceiling mosaics	202
	Table 15	Buildings in Perugia with wall/ceiling mosaics	208
	Table 16	Buildings in Pisa with wall/ceiling mosaics	209
	Table 17	Buildings in Pistoia with wall/ceiling mosaics	212
	Table 18	Buildings in Rome with wall/ceiling mosaics	213
	Table 19	Buildings in Sicily with wall/ceiling mosaics	219
	Table 20	Buildings in Siena with wall/ceiling mosaics	223
	Table 21	Buildings in Southern Italy with wall/ceiling mosaics	224
	Table 22	Buildings in Venice with wall/ceiling mosaics	226
Appendix 2	Table 23	Arezzo: Mosaicists who worked in the city between 1270 and 1529 in chronological order	239
	Table 24	Florence: Mosaicists who worked in the city between 1270 and 1529 in chronological order	240

	<b>Table No.</b>	<b>Title</b>	<b>Page No.</b>
Appendix 2	Table 25	Lucca: Mosaicists who worked in the city between 1270 and 1529 in chronological order	258
	Table 26	Orvieto: Mosaicists who worked in the city between 1270 and 1529 in chronological order	259
	Table 27	Perugia: Mosaicists who worked in the city between 1270 and 1529 in chronological order	267
	Table 28	Pisa: Mosaicists who worked in the city between 1270 and 1529 in chronological order	268
	Table 29	Pistoia: Mosaicists who worked in the city between 1270 and 1529 in chronological order	276
	Table 30	Rome: Mosaicists who worked in the city between 1270 and 1529 in chronological order	278
	Table 31	Sicily: Mosaicists who worked in the area between 1270 and 1529 in chronological order	283
	Table 32	Siena: Mosaicists who worked in the city between 1270 and 1529 in chronological order	284
	Table 33	Southern Italy: Mosaicists who worked in the area between 1270 and 1529 in chronological order	286
	Table 34	Venice: Mosaicists who worked in the city between 1270 and 1529 in chronological order	287
	Table 35	Other possible Mosaicists of the late Thirteenth Century to early Sixteenth Century (in alphabetical order)	296
Appendix 3	Table 36	Period 1: 1270-1329	297
	Table 37	Period 2: 1330-1449	300
	Table 38	Period 3: 1450-1529	301

## List of Figures

<b>Chapter</b>	<b>Figure No.</b>	<b>Title</b>	<b>Page No.</b>
Chapter 1	Figure 1	Number of buildings where mosaic activity occurred during each of the decades from 1270 to 1529, showing the balance between new installations and repairs.	26
	Figure 2	Number of buildings with documented mosaics installed between 1270 and 1529 in four regions of Italy	27
	Figure 3	Map of Italy showing cities where mosaics are known to have been installed between 1270 and 1529	28
Chapter 2	Figure 4	Potential foreign sources of materials used for glass-making in Italy, 1270 to 1529	41
Chapter 3	Figure 5	Number of “workshops” of mosaicists and individual, named mosaicists recorded in the database as working in Italy in each of the decades from 1270 to 1529	69
	Figure 6	Numbers of “workshops” of mosaicists and individual, named mosaicists recorded as working in Florence, Orvieto, Pisa, Rome and Venice in the periods 1270-1329, 1330-1449 and 1450-1529	71
	Figure 7	Numbers of mosaicists recorded in the database who, between 1270 and 1529, worked only in one city, and those who travelled to work in other cities (in any media)	84
Chapter 4	Figure 8	Percentage of scenes showing the specified images over the three time periods, 1270-1329, 1330-1449 and 1450-1529	101
	Figure 9	Changes in the architectural locations of newly installed mosaics during the three periods, 1270-1329, 1330-1449 and 1450-1529	103

## List of Illustrations

Illustrations	Page
<b>Plate 1</b> Furnace design (i) Illuminated miniature from the manuscript of Hrabanus Maurus, <i>De Universo</i> 1023 from the Abbey of Montecassino (Codex 132). Source: Robert J. Charleston, “Glass Furnaces through the Ages”, p. 11. (ii) Drawing from a late fifteenth century manuscript in the Vatican Library ( <i>Chigi F. VIII 188 f.191</i> ). Source: Robert J. Charleston, “Glass Furnaces through the Ages”, p. 13. (iii) Illustration by Vannoccio Biringuccio, from <i>Pirotechnia</i> , Venice, 1540. Source: Robert J. Charleston, “Glass Furnaces through the Ages”, p. 14. (iv) Partially sectioned view of a glass furnace showing the three parts of the furnace, illustrated by Agricola in <i>De Re Metallica</i> , 1556. Source: C. Singer (ed.), “A History of Technology”, p. 209.	306
<b>Plate 2</b> San Miniato al Monte, Florence. Interior showing the apse mosaic by Francesco da Pisa. Date: 1295. Photo: Author, 2013.	308
<b>Plate 3</b> The brick facade with rose window at the Franciscan (Gothic) church of Santa Maria Gloriosa dei Frari, Venice. Date: around 1330. Photo: Author, 2015.	309
<b>Plate 4</b> Santa Maria Maggiore, Rome. Interior showing the apse mosaic of <i>The Coronation of the Virgin</i> with two mendicant saints alongside the apostles. Below, scenes from <i>The Life of the Virgin</i> . Both mosaics by Jacopo Torriti. Date: 1295. Photo: Author, 2014.	310
<b>Plate 5</b> Apse mosaic with the emblema of Christ’s bust and showing two mendicant saints alongside the apostles at San Giovanni in Laterano, the cathedral of Rome, by Jacopo Torriti. Date: late 13 <sup>th</sup> Century. Photo: Author, 2014.	311
<b>Plate 6</b> Santa Maria Assumpta, the Cathedral of Pisa. Interior showing the position of the apse mosaic by Francesco da Pisa, Cimabue and Vincino da Pistoia. Date: 1301-1302, and 1321. Photo: Author, 2013.	312
<b>Plate 7</b> San Miniato al Monte, Florence. Close up of the facade mosaic (mosaicist unknown). Date: late 13 <sup>th</sup> Century. Photo: Author, 2013.	313



Illustrations	Page
<b>Plate 8</b> Mosaic. Facade of San Frediano, Lucca, showing <i>The Ascension of Christ</i> by an unknown mosaicist. Date: second half of 13 <sup>th</sup> Century. Photo: Author, 2013.	314
<b>Plate 9</b> Small lunette mosaic above doorway showing Santa Reparata at Santa Maria Assumpta, Pisa Cathedral, by Alesso Baldovinetti. Date: second half 15 <sup>th</sup> Century. Photo: Author, 2013.	315
<b>Plate 10</b> Lunette mosaic above door showing fruits, leaves and ribbons, Santa Maria Assumpta, Pisa Cathedral, mosaicist unknown. Date: 1455? Photo: Author, 2013.	316
<b>Plate 11</b> <i>The Annunciation</i> , mosaic (in poor condition) in a small lunette above external door, Santissima Annunziata, Florence, by Davide Ghirlandaio. Date: 1504. Photo: Author, 2013.	317
<b>Plate 12</b> Detail of the sculptural lunette above the door on the eastern façade of the Cathedral of Notre Dame, Paris. Date: circa 1210. Photo: from the web site of Notre Dame, Paris.	318
<b>Plate 13</b> Chigi Chapel, Santa Maria del Popolo, Rome. Ceiling mosaic of <i>The Creation</i> , designed by Raphael and set by Luigi di Pace. Date: 1516. Photo: Author, 2014.	319
<b>Plate 14</b> Dome above the baptismal font, Baptistry of San Marco, Venice. Mosaic, <i>Christ sends the apostles to baptise the Nations</i> by the Workshop of the Baptistry, showing Christ holding the flag of the Venetian fleet. Date: mid-14 <sup>th</sup> Century. Photo: Caravaggi, "San Marco, The Mosaics, The Inscriptions, The Pala d'Oro", p. 185.	320
<b>Plate 15</b> Venetian coin in the Correr Museum, Venice, showing Saint Mark and Andrea Dandolo jointly holding a Paschal candle. Date: mid-14 <sup>th</sup> Century. Photo: Author: 2015.	321
<b>Plate 16</b> Baptistry of San Giovanni, Florence. Part of the bronze Door of Paradise on the northern portal showing contrapposto figures and classical architecture in a French-styled frame in <i>The Annunciation</i> by Lorenzo Ghiberti. Date: 1403 – 1424. Photo: Paolucci, "The Baptistry of San Giovanni Florence", Vol. 2 (Photo-Atlas), p. 150.	322
<b>Plate 17</b> Interior of the Cathedral in Pienza, Tuscany showing a large window in the eastern wall flooding the interior with light, and a plain, colourless style. Date: late 15 <sup>th</sup> Century. Built for the humanist Pope Pius II by Bernardo Rossellino. Photo: Author, 2014.	323

<b>Illustrations</b>	<b>Page</b>
<b>Plate 18</b> Small bust of San Zenobius (in mosaic) by Monte di Giovanni (and entered for a competition to select a mosaicist to carry out the decoration of a chapel dedicated to the saint in the cathedral of Florence). Date: 1504. Now in Museo del Opera, Florence. Photo: Author, 2013.	324
<b>Plate 19</b> Mosaic of San Zenobius, detail, by Monte di Giovanni showing the mosaicist's attempt to portray the countryside surrounding Florence. Date: 1504. Now in Museo del Opera, Florence. Photo: Author, 2013.	325
<b>Plate 20</b> The Baptistry of San Giovanni, Florence (interior) showing San Zenobius, (the same subject as in Plate 16). Date: 1300 – 1310. Photo: Paolucci, "The Baptistry of San Giovanni", Vol. 2 (Photo-Atlas), p. 396.	326
<b>Plate 21</b> One of three ceramic altarpieces in S. Agata, in the village of Radicofani, Tuscany, by the della Robbia workshop using the restrained blue and white colour combination that was valued during the Renaissance. Date: mid-15 <sup>th</sup> Century. Photo: Author, 2013.	327
<b>Plate 22</b> Intarsia showing perspective on the choir stalls in San Francesco, Assisi, by Domenico Indovini. Date: 1491 -1501. Photo: Magro, "Assisi: History, Art, Spirituality", p. 55.	328
<b>Plate 23</b> Stained glass window as an alternative to mosaic decoration, now in the Museo del Opera, Siena, by Duccio. Date: 1288. Photo: Author, 2014.	329
<b>Plate 24</b> Sculptural facade as an alternative to mosaic decoration at Pisa's Cathedral (by Rainaldo). Date: late 13 <sup>th</sup> Century. Photo: Author, 2013.	330

### Map: Political Context I: Italy circa 1300



Brief commentary:

The Holy Roman Empire was weak at this time and in practice, had little political influence in the northern part of Italy.

The papal court was rent with internal divisions and in 1304, departed to France until its permanent return in 1417, leaving a political void in central Italy.

The Kingdom of Sicily in the south continued to be contested by the French and Spanish until 1816.<sup>2</sup>

---

<sup>2</sup> Daniel Waley, *Later Medieval Europe* (London: Longman, 1975), pp.33-55.

### Map: Political Context II: Italy circa 1500



Brief commentary: The latter part of the fourteenth century and fifteenth century saw the rise of powerful city states/republics, effectively under the control of leading families such as the de'Medici (Florence), Visconti and Sforza (Milan), and Este (Ferrara) and a period of relative peace in Italy without foreign invasions. However, the sometimes bitter rivalries between the city states was exploited by the French in the late fifteenth century, and they invaded Italy in 1494-5. In the 1520s, the ambitious Holy Roman Emperor, Charles V, challenged the French and effectively became the ruler of Italy.<sup>3</sup>

---

<sup>3</sup> Daniel Waley, *Later Medieval Europe* (London: Longman, 1975), pp.244-245.

**Map: Italian cities where mosaics are known to have been installed  
between 1270 and 1529**



## Introduction

The medium of mosaic is rarely mentioned in the art histories of Italy that cover the period between the late Middle Ages and the Renaissance.<sup>4</sup> In Veronica Sekules' *Medieval Art*, there are only four brief references to mosaics and one small illustration of the art form, whilst in the *History of Italian Renaissance Art, Painting, Sculpture, Architecture* by Frederick Hartt and David G. Wilkins, the word *mosaic* does not feature in the book's subtitle or index, and the text does not include any illustrations of mosaic art.<sup>5</sup> This lack of discussion about mosaic art implies that mosaic was not a significant art form, that mosaics were not widely made in Italy between the late-thirteenth century and the early- sixteenth century, and that few artists practised the art.<sup>6</sup>

The main aims of my thesis are to explore the validity of these assumptions, but also to look more broadly at what can be discovered about Italian mosaic art during the period. To pursue these aims, I have collected relevant data and produced "two tables from the databases (hereafter referred to as databases) which present hard evidence about mosaic art."<sup>7</sup> They form the foundations for the first four chapters of the thesis which present new information about how many mosaics seem to have been made during the time frame of the thesis, how they were made, the mosaicists who made them, and the iconography of the mosaics. Two concluding chapters discuss the difficult issues as to why patrons may have chosen to commission, or not to commission, mosaics between 1270 and 1529 as these matters would have had an impact on the long-term viability of the art form.

---

<sup>4</sup> Throughout the thesis, the word *Italy* refers to the nation as it is today, that is, including Sicily. However, between 1270 and 1529, Sicily belonged to the French, and then Spanish rulers of Naples. The term *Renaissance* is conventionally ascribed to the fourteenth and fifteenth centuries, although the timing of its emergence differed in the uniquely different city-states of Italy. For example, see Carol M. Richardson (ed), *Locating Renaissance Art*, Vol 2 in the series *Renaissance Art Reconsidered* (New York: Yale University Press, 2007).

<sup>5</sup> Veronica Sekules, *Medieval Art* (Oxford: Oxford University Press, 2001) and Frederick Hartt and David G Wilkins, *History of Italian Renaissance Art*, 5<sup>th</sup> ed. (New York: Harry N. Abrams, 2003).

<sup>6</sup> A rationale for the parameters of this thesis is provided later, on page 4.

<sup>7</sup> Subsequently, the short terminology "database(s)" is used throughout this thesis instead of the fuller term "tables from the databases" because it makes the text flow more lucidly. The precision of the dates arises from the necessity to ascribe mosaics to ten-year periods in the database, thus 1510-1519, 1520-1529.

The first database details the numbers of wall and ceiling mosaics that were installed in major Italian cities between 1270 and 1529 (Appendix 1).<sup>8</sup> This provides, for the first time, an indication of the numbers of mosaics that were made between the late-thirteenth century and early-sixteenth century. The second database quantifies the number of men who are known to have made mosaics during the period (Appendix 2). Again, there has been no previous attempt to gain any idea of how many artists worked as mosaicists during the late Middle Ages and the Renaissance. Together, these databases thus represent the first attempt to construct quantifiable evidence about Italian mosaic art in the period.

Inevitably, the two databases present only a sample of the full extent of mosaic art and the total numbers of artists who produced mosaics during the time period. It is almost certain that mosaics and records of them have been lost, and that some mosaicists will remain forever unknown. Nevertheless, the size of each database is large enough to give a good indication of the extent of mosaic art in Italy over approximately two and a half centuries between 1270 and 1529, and to give a sense of how many artists were employed in practising the art.

It is on the basis of this data that Chapter 1, *The Extent and Location of Mosaic work in Italy, 1270 -1529*, not only quantifies the amount of mosaic work carried out in Italy but also identifies three distinct phases of mosaic activity during the time frame. Additionally, the databases inform a discussion of where mosaics were installed in Italy and the possible reasons for their geographical distribution. The thesis also provides new information about how glass tesserae and mosaics were made between 1270 and 1529 and a discussion about the challenges faced by mosaic art whilst the technology remained so unchanging and unreliable. This discussion in Chapter 2, *The Production of Mosaics*, focuses on why the technology was, at least in part, responsible for what is generally assumed to be the high cost of mosaic art and the length of time it may have taken for a mosaic to be made. Both are important issues because they may have affected the perceived attractiveness of the medium to patrons.

---

<sup>8</sup> The study does not include floor mosaics because these were not generally made from glass tesserae. They tend to be composed of geometric patterns rather than pictorial images.

Little has been previously written about those artists who made mosaics between 1270 and 1529. They have remained rather obscure. Chapter 3, *The Mosaicists*, seeks to redress this. It starts by quantifying the numbers of mosaicists who are traceable and notes trends in their employment. Issues such as different patterns in the nature of their job are discussed, as well as the extent to which mosaicists travelled around Italy in search of work, and whether or not they diversified by taking up jobs in other artistic fields in response to changes in the demand for mosaic art. This chapter particularly highlights the different employment circumstances in the major cities of Italy, and reinforces art historians' existing notions of the individual nature of Italian cities between 1270 and 1529.

Similarly, little has been written about the images shown in the mosaic art of the fourteenth, fifteenth and sixteenth centuries, and even less about the influences on their iconography. In Chapter 4, *The Iconography of Mosaics*, the database of mosaics is analysed to see if the iconography chosen by patrons changed between the late-thirteenth century and the early-sixteenth century. This is followed by a discussion about the influences that may have induced those changes.

The final two chapters of the thesis discuss what kind of patrons commissioned mosaic between 1270 and 1529 and why they may have chosen the medium, or alternatively, turned away from the medium. These are difficult issues. The databases provide no clues and there are no contemporaneous documents to help. My answers are therefore speculative, relying on a multi-disciplinary approach that examines what is known about the possible influences of the many theological, philosophical, political, economic, social and cultural changes that occurred in Italian society between 1270 and 1529.

Throughout these chapters, painting and other media are referred to, but given the already broad scope of the thesis in both geographical and chronological terms, I have made no attempt to enter into detailed discussions on these other media.

Various chapters refer to the cost of artistic commissions or to an artist's pay. To put these sums into a meaningful context has not been easy, given that each city operated its own currency system, sometimes changed their currency and that over time,



exchange rates between currencies varied as they devalued or increased in value. As a further complicating matter, Florentine payments for instance were either made in silver coins for small purchases and gold ones (florins) for larger ones and their relative values fluctuated over time.<sup>9</sup> Contextual comparisons are therefore approximate.

### **The importance of mosaic**

Italy has a long heritage of using the medium, starting from the pre-Christian era and extending into medieval times.<sup>10</sup> Despite its absence from art historical literature, it might be expected that mosaic work would have continued throughout the peninsula between 1270 and 1529. This supposition is strengthened by the knowledge that mosaic art continued intermittently throughout the period in the Venetian basilica of San Marco, as well as elsewhere in Europe, and in the Byzantine East.<sup>11</sup> The facade of Saint Vitus Cathedral in Prague, for instance, was decorated with mosaic in the late fourteenth century.<sup>12</sup> Zdenka Hledikova suggests that this work was carried out by Italian mosaicists and furthermore that they may have learned the necessary skills whilst working on mosaics in Italy. It is also known that in the fourteenth and fifteenth centuries, mosaic was used in lands known today as Greece, Turkey, Lebanon, Israel, Egypt and Uzbekistan.<sup>13</sup>

Scholars who have previously written on Italian mosaic art have mostly directed their attention to periods when it was at its height, and in narrowly defined places, such the Early Christian period in Rome, the sixth century in Ravenna and the twelfth century in

---

<sup>9</sup> Peter Spufford, *Money and its use in Medieval Europe* (Cambridge: Cambridge University Press, 1988).

<sup>10</sup> Paul Roberts, *Life and Death in Pompeii and Herculaneum* (London: British Museum, 2013), p. 216. See also Mario D'Onofrio, 'Medieval Architecture' in *Rome, Art and Architecture*, ed by Marco Bussagli (Cologne: Konemann, 1999), p. 219 and Otto Demus, *The Mosaics of San Marco in Venice*, Vol. 2 (Chicago: University of Chicago Press, 1984).

<sup>11</sup> *The Composition of Byzantine Glass Mosaic Tesserae* (University of Sussex), <http://www.sussex.ac.uk/byzantine/mosaics/> [Accessed 9 January 2016].

<sup>12</sup> Zdenka Hledikova, 'Charles IV's Italian Travels' in *Conservation of the Last Judgement Mosaic, St. Vitus Cathedral, Prague*, ed by Francesca Pique and Dusan C. Stulik (Los Angeles: Getty Publications, 2004), pp. 11 and 16. The Emperor made three visits to Italy in the middle decades of the fourteenth century, including to the major basilicas of Rome and San Frediano in Lucca where there is a large facade mosaic. The mosaic facade in Prague was completed in 1371.

<sup>13</sup> *The Composition of Byzantine Glass Mosaic Tesserae*. Mosaics were installed, for example, as follows: Church of the Virgin Pege, Lakonici, Greece; Esrefoghi Camay Mosque, Basehor, Turkey; Burtasiyya Mosque, Lebanon; Ibrahimi Mosque, Israel; al-Maridani Mosque, Cairo, Egypt; and Aq-Saray Palace, Shahrisabz, Uzbekistan.

Norman Sicily.<sup>14</sup> No longitudinal study over Italy as a whole has been written. Scholars have also concentrated on a few specific aspects relating to mosaic, such as their style, iconography, date and condition, rather than the broader issues of how many were made, and why. In contrast, this research focuses on the whole country over a period of approximately two and a half centuries with a view to providing information that is currently missing from the history of Italian mosaic art.

### **The parameters of the thesis**

I set out to track what happened to the art of mosaics between the late Middle Ages and the Renaissance. The thesis therefore needed a date in the late Middle Ages and I chose 1270 for two important reasons. In the first place, as can be seen from Map 1, the Political Context of Italy around 1300, central and northern Italy was relatively stable in the years before 1300, compared with the political situation in the twelfth and early thirteenth century.<sup>15</sup> Towards the end of the thirteenth century, there were no invasions, wars and occupations by foreign powers that would have imposed strains on the economy and perhaps limited the patronage of art. Secondly, the study commences around 1270 because research conducted by the University of Sussex's Byzantine Centre suggests a revival in the use of mosaic decoration on the walls and ceilings of Roman churches around the late-thirteenth century.<sup>16</sup> The Sancta Sanctorum at the Lateran, Saint Peter's Basilica, and the churches of San Giovanni in Laterano, Santa Maria Maggiore and Santa Maria in Trastevere, for example, were all decorated with mosaic art around the end of the thirteenth century. This occurred after an apparent lapse in the use of mosaic decoration for approximately a century and a half during less politically stable times.<sup>17</sup> The start date of 1270 is also

---

<sup>14</sup> Walter Oakeshott, *The Mosaics of Rome* (London: Thames and Hudson, 1967) . See also Eve Borsook, *Messages in Mosaic* (Woodbridge: The Boydell Press, 1990) and Otto Demus, *The Mosaics of Norman Sicily* (London: Routledge and Kegan Paul, 1949).

<sup>15</sup> See Map, The Political Context I: Italy circa 1300s on p. xiii.

<sup>16</sup> See the dates collected by *The Composition of Byzantine Glass Mosaic Tesserae*. See also Richard Krautheimer, *Rome, Profile of a City, 312-1308* (New Jersey: Princeton University Press, 1980), p. 161. In the late eleventh and early twelfth centuries, mosaics were installed into the Roman churches of San Clemente, Santa Maria in Trastevere and Quattro Coronati for example. During the lapse in the use of mosaic, frescoes were painted in the convent of San Martino ai Monti, for example. See also Alessandro Tomei, 'Pictorial Art from the Fifth to the Fourteenth Century' in *Rome, Art and Architecture*, ed by Bussagli (Cologne: Konemann, 1999), p. 328.

<sup>17</sup> *The Composition of Byzantine Glass Mosaic Tesserae*, <http://www.sussex.ac.uk/byzantine/mosaics/> [accessed 9 January 2016]. See also Krautheimer, *Rome, Profile of a City, 312-1308*, p. 161. In the late

approximately when the use of mosaics in cities outside of Rome, including in Lucca, Florence, Pisa, Salerno and Palermo is found, thereby suggesting that a revival of mosaic art may have occurred widely across Italy.<sup>18</sup>

1529 was chosen as the terminus for the thesis because, by this time, all the major cities of Italy had been exposed to the ideas and styles of what we think of as the Renaissance.<sup>19</sup> Additionally, the 1520s saw a period of internal political instability draw to a close and the emergence of strong rule from outside of Italy. Before this decade, the rulers of the city states were frequently in conflict, and Rome and the catholic papacy were looking increasingly out of touch with religious and political movements across Europe.<sup>20</sup> There were threats from outside of Italy that included the Holy Roman Emperor threatening to depose the pope, sacking Rome and killing at least 4,000 people in 1527, effectively imprisoning the pope in the castel Sant'Angelo, and creating a culture whereby Luther's name could be scribbled over Raphael's paintings in the Vatican Stanze.<sup>21</sup> After the 1520s, the balance of power shifted from out of the hands of rulers of the multiple city states in Italy and popes, and into the hands of a strong Holy Roman Emperor from lands to the north of Italy.<sup>22</sup> Furthermore, the mosaic decoration of the Chigi Chapel in the Roman church of Santa Maria del Popolo in the second decade of the sixteenth century effectively marked a closure in the use of this medium in Italy, apart from in the Venetian basilica of San Marco. The exactitude of the dates 1270 -1529 reflects the means used to construct the databases of mosaic work and mosaicists. Both were ascribed to decades, for example: 1500-1509, 1510-1519 and 1520-1529.

---

eleventh and early twelfth centuries, mosaics were installed into the Roman churches of San Clemente, Santa Maria in Trastevere and Quattro Coronati for example. During the lapse in the use of mosaic, frescoes were favoured, as, for example, in the convent of San Martino ai Monti. See also Alessandro Tomei 'Pictorial Art from the Fifth to the Fourteenth Century' in *Rome, Art and Architecture*, ed by Bussagli, p. 328.

<sup>18</sup> *The Composition of Byzantine Glass Mosaic Tesserae*.

<sup>19</sup> Data concerning mosaic art was collected in named decades such as, 1270 -1279, 1280-1289, 1290-1299 and so on. This explains the precise date of 1529.

<sup>20</sup> Eamon Duffy, *Saints and Sinners. A History of the Popes* (New Haven: Yale University Press, 2014), p. 205.

<sup>21</sup> *Ibid.* p. 206.

<sup>22</sup> See Map, The Political Context 2: Italy circa 1500, page xiv.

The extended period of approximately two hundred and fifty years between 1270 and 1529 has the advantage of allowing any patterns in the rates at which mosaic was commissioned to be clearly identifiable in the databases.

### **The databases**

There is no existing, comprehensive record of mosaic art in Italy between 1270 and 1529. Even in the case of individual cities, complete records of mosaic activity have not been compiled or set in any wider context. For example, in Florence, although the mosaics in the Baptistery of San Giovanni have been photographed, dated between the early thirteenth and fourteenth centuries and ascribed to mosaicists or schools of mosaicists by Antonio Paolucci and his colleagues, they make no mention of what mosaics were installed into other Florentine buildings over the same period.<sup>23</sup> In Rome, there is not even a partial record of mosaics that were installed between 1270 and 1529.

Much of the research for this thesis involved the collection of qualitative data which I have presented in two databases. The first database enumerates not only the new wall or ceiling mosaics that are known to have been installed into buildings, but also the repairs made to pre-existing mosaics, across Italy between 1270 and 1529. Many of these mosaics still exist, although some are known to have been lost to earthquake damage, fire, neglect or replacement by later fashions, for example by Baroque plasterwork. When they are known about from documents, drawings or remaining fragments, lost mosaics have been included in the database. However, an unknown number of mosaics are likely to have been lost without trace and the actual level of mosaic art practised in Italy between 1270 and 1529 was therefore probably higher than shown in the database. The database is arranged by city and contains detailed information, when available, about the following: the buildings into which mosaics

---

<sup>23</sup> Antonio Paolucci (ed), *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo Atlas), trans. by Barbara Fisher *et al.* from the *Mirabilia Italiae* Series (Modena: Franco Cosimo Panini, 1994). A *school* of mosaicists is taken to mean a group of anonymous mosaicists. The size of each group is unknown. The alternative word, *workshops*, is sometimes used by scholars. The issues connected with *schools/workshops* will be discussed in Chapter 3.

were installed between 1270 and 1529, and the internal or external position of the mosaics; the city where the buildings were located; the date and size of the mosaics, their iconography; the names of patrons and mosaicists; when the mosaics were restored; and references.

The second database of mosaicists contains information about artists who are known to have made mosaics between 1270 and 1529. All of the artists listed in the database are male. I found no evidence of women working as artists in the medium. The database includes information, when available, about: the names of mosaicists, with alternative names if known; the mosaicists' birth-places; the locations where they worked; whether they worked on new installations or repairs; when they worked; whether they are known to have worked in any other medium; and references. The numbers of mosaicists are also likely to be an understatement since the database records individuals, and as I shall show in Chapter 3, some anonymous men worked in "schools", or teams of an indeterminate size. These two databases are the first comprehensive attempt to catalogue mosaics installed in Italy between 1270 and 1529, and mosaicists who were active in Italy during the same period.<sup>24</sup>

## **Methodology**

In the first instance, I conducted a literature search on the University of Sussex and the Warburg Institute's online library websites. These searches were performed using combinations of keywords including; Italy, mosaic(s), tessera(e), mosaicist(s), basilica(s), church(es) and cathedral(s). This yielded books and journal articles revealing a small corpus of work on mosaic art during my time period. Furthermore, these published works revealed possible sources of information in their content and

---

<sup>24</sup> Two organisations have produced limited catalogues of mosaics, with brief annotations. The Centro Internazionale di Documentazione sul Mosaico has a multi-media database that includes floor and wall mosaic installations, mostly in Ravenna from the fifth and sixth centuries, but also in Venice, Trieste, and modern-day Greece, Croatia and Istanbul. It is not therefore a catalogue covering the whole of Italy, or covering the fourteenth and fifteenth centuries, <http://www.mosaicoravenna.it> [Accessed 9 January 2016]. The Fondazione Federico Zeri, part of the University of Bologna, has a catalogue of 290,000 photographs of Italian monuments and works of art, including just 88 mosaics from the fourth to the eighteenth century. It is thus very far from being a comprehensive catalogue of Italian mosaics, <http://www.fondazionezeri.unibo.it> [Accessed 9 January 2016].

bibliographies. For example, when Domenico Ghirlandaio was found to have worked as a mosaicist as well as a painter, then further searches were carried out on both online libraries mentioned above, using his name as a search term.

As only a relatively limited corpus of published research was found during my initial literature search, I proceeded to perform two stages of internet research. Firstly, a search was carried out using an internet search engine and using the above keywords in both English and Italian, including the use of archaic spellings. This stage of my research revealed some general sources such as: the University of Sussex's website, "The Composition of Byzantine Glass Mosaic Tesserae", the *Istituto Centrale per il Catalogo e la Documentazione* at the *Ministero per I Beni le Attivita Culturali* in Sicily, and the *Fondazione Federico Zeri* at the University of Bologna. Secondly, I searched in Italian for each cathedral and major church in the main cities of Italy that existed during my time period, which led me to the official Italian language website for each ecclesiastical building. Every website was methodically checked in turn. This method yielded extra mosaics that had not been found in the previous searches, such as the mosaic in the chapel of Santa Restituta, once the original cathedral of Naples.

Having drawn up a list of buildings that appeared to either contain, or had once contained mosaics that were installed between the Middle Ages and the Renaissance, the final part of my methodology was to conduct fieldwork. This fieldwork in Italy was extensive, ranging geographically from Venice in the north of Italy to Salerno in the south, and it enabled mosaics to be added to the database that are not mentioned in published primary documents, secondary texts or websites. These include, for example, an early-sixteenth century mosaic in the church of San Salvador, Venice, a small exterior mosaic at the cathedral of Pisa and a mosaic depiction of the Caetani family's coat of arms surmounting the sculptured image of Pope Boniface VIII on the exterior wall of Anagni cathedral. Moreover, fieldwork in the museum and cathedral at Narni revealed that a medieval mosaic had been bricked over until its discovery in the 1950s.<sup>25</sup> Re-configuration of buildings was added to the list of other reasons for the

---

<sup>25</sup> Oral Information provided by the curator of the museum in Narni and site viewed during fieldwork.

loss of mosaics.<sup>26</sup> During fieldwork, sight of a repair to a damaged mosaic in Salerno's cathedral with paint suggested a number of possible reasons this, including the cost of mosaic work, or the shortage of tesserae or artists who were able to set them.

Fieldwork also made clear the dominance of fourteenth and fifteenth century fresco decoration in the churches and cathedrals of Italy, as well as the appearance of newer forms of decoration such as terracotta tin-glazed reliefs.

Fieldwork also enabled the sizes of some mosaics to be estimated, a matter rarely recorded in scholarly texts, except notably by Roberto Caravaggi at the basilica of San Marco, Venice.<sup>27</sup> Their dimensions can vary greatly, from small lunette mosaics with an area of two or three square metres to large apse mosaics with areas approaching two hundred square metres. A comparison of the numbers of mosaics installed at different times or in different places cannot therefore be entirely valid without also some indication of their sizes.

All the cities, towns and villages visited during fieldwork are listed in Table 1, together with the present-day region in which they are situated.

**Table 1: Cities, towns and villages that formed the basis of the research**

Region	City, town or village
Campania	Amalfi, Capua, Naples, Ravello, Salerno, Sant' Angelo in Formis and Sessa Aurunca.
Lazio	Anagni, Aquino, Civit� Castellana, Ferentino, Grottaferrata, Minturno, Montecassino and Rome
Tuscany	Barga, Florence, Lucca, Pienza, Pisa, Pistoia, Prato, Radicofani and Siena
Umbria	Monteleone, Orvieto, Narni, Piegara and Spoleto
Veneto	Venice and the islands of Murano and Torcello

<sup>26</sup> These were earlier cited as fire, water damage, neglect and later fashions, for example, Baroque plasterwork. The museum at San Marco in Venice contains examples of fire damaged tesserae.

<sup>27</sup> Roberto Caravaggi (ed), *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, Vol. 2 (Milan: Gruppo Editoriale Fabbri, 1991).

It will be seen that fieldwork was not carried out in cities, towns or villages in some of the southern regions of Italy such as Basilicata, Calabria, Molise and Puglia, or northern regions such as Emilia-Romagna, Liguria, Lombardia and Piemonte, since preliminary research suggested that there was no evidence that mosaic decoration was ever used there between 1270 and 1529.<sup>28</sup> In Sicily, only a limited amount of mosaic activity occurred in churches during the fourteenth and fifteenth century, and few of the mosaics are still in situ because of earthquake destruction.<sup>29</sup>

Because of the extent of fieldwork conducted throughout Italy and the time consumed, it was not within my remit to undertake any archival research, though it is plausible that evidence of other mosaics may survive in cities' archives. Nevertheless, it is known that some of the archives in cities such as Lucca and Naples are far from complete, having suffered loss of records through fires, or bomb damage during World War II. However, primary sources were consulted where available either electronically, or published in hard copy.<sup>30</sup>

### **Scholarly work on Italian Mosaics in the late Middle Ages and Renaissance**

Although the history of Italian art in the late Middle Ages and the Renaissance has been extensively studied, Italian mosaic art from the fourteenth, fifteenth and early-sixteenth centuries has rarely attracted scholarly attention. Very little has been published about any aspect of mosaic art in that time frame, and certainly nothing that provides us with a comprehensive overview of the art form. Richard Krautheimer's general study of Rome's architecture and art started at the time of Constantine and ended with the removal of the papal court to France in 1304. This has been a recurring

---

<sup>28</sup> This was even though some of the northern cities, such as Milan and Aquileia, had patronised mosaic decoration in much earlier centuries. In the absence of more recent scholarship, see Karl Baedeker (ed), *Northern Italy*, (Leipzig: Karl Baedeker, Publisher, 1906) . For example, the Milanese church of Sant'Ambrogio has ninth-century mosaics in the tribune but no mosaics appear to have been installed at any later date, either in Sant'Ambrogio, or elsewhere in Milan, *ibid.* p. 157. A basilica in the Piazza della Corte in Aquileia contains fragments of sixth-century mosaics, however, there are no references to mosaics installed between 1270 and 1529, *ibid.* p. 354.

<sup>29</sup> *Itinerari culturali del medioevo siciliano, le opere pittoriche e musive: mosaici* (Istituto centrale per il catalogo e la documentazione), <http://www.iccd.Beniculturali.it/medioevosiciliano/index.php?it/128/mosaici> [Accessed 9 January 2016].

<sup>30</sup> For example, original documents at: <http://archivio.operaduomo.fi.it/cupola/ENG/DA/DAMAIN.HTM> and Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*.



end-date amongst other scholars, leaving the bulk of the fourteenth century, as well as the fifteenth and early-sixteenth centuries overlooked.<sup>31</sup> For example, Walter Oakeshott, writing specifically on mosaics in Rome, also finished his research around 1300.<sup>32</sup> Julian Gardner's research into the artistic patronage of the papacy included mosaic art, but it began in the early twelfth century and again, finished in 1304.<sup>33</sup> None of these scholars quantified the extent of mosaic installation in Rome at the end of their chosen period and nowhere are details given about how much mosaic work was carried out in other major Italian cities such as Florence, Naples and Pisa during the fourteenth, fifteenth and early-sixteenth centuries.

What research there is on Italian mosaic art between the late-thirteenth and early-sixteenth centuries falls into three main categories. The first has a narrow focus, concentrating on individual buildings renowned for their mosaics, such as the Baptistery of San Giovanni in Florence, the basilica of San Marco in Venice and the Orvietan cathedral. Mosaics in these cities have attracted considerable discussion around issues of dating, iconography and the ascribing of mosaics to particular mosaicists or mosaic workshops, that is, to groups of anonymous skilled workmen. Antonio Paolucci published a corpus in two volumes on the Baptistery of San Giovanni in Florence in 1994.<sup>34</sup> Paolucci's work contains a full, coloured photographic record of all the mosaics and other decorative devices inside the Baptistery, including mosaics of the late-thirteenth and early-fourteenth centuries. All the photographs are annotated with the names of mosaicists, when known, or alternatively the "schools" or workshops that he identified on stylistic grounds, together with exact or approximated dates for their work. The commentary, provided by different specialists in their field, concentrates on the architecture and function of the Baptistery, the mosaics in various parts of the building, and the history of restorations to the building and its decorative art. Technical aspects relating to the mosaic decoration such as how the glass tesserae

---

<sup>31</sup> Krautheimer, *Rome, Profile of a City, 312-1308*.

<sup>32</sup> Oakeshott, *The Mosaics of Rome*.

<sup>33</sup> Julian Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304* (Munich: Hirmer Verlag Munchen, 2013).

<sup>34</sup> Antonio Paolucci (ed), *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), trans. by Barbara Fisher et al. from the *Mirabilia Italiae Series* (Modena: Franco Cosimo Panini, 1994). Antonio Paolucci (ed), *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), trans. by Barbara Fisher et al. from the *Mirabilia Italia Series* (Modena: Franco Cosimo Panini, 1994).

were made and set into the mortar are not discussed. Nor does Paolucci include transcriptions of any contracts for the mosaic work or records of payments made to mosaicists for their work and materials, so the cost of the decorative programme appears to be unknown.

Similarly, Otto Demus' corpus in four volumes focused above all on the mosaic style used in the Venetian basilica of San Marco and followed his supervision of the restoration and cleaning of the mosaics in the 1980s.<sup>35</sup> However, Demus did not deal with the technical aspects of mosaic art nor make any estimation of the cost of the decoration of any of the chapels or areas of the basilica. The study of the basilica of San Marco in Venice, edited by Roberto Caravaggi in the 1990s, employed a very similar format to Paolucci's corpus.<sup>36</sup> His two volumes again deal with one building and also contain an extensive coloured photographic record of many of the exterior and interior mosaics, together with their sizes and the mosaicists' names, or alternatively the mosaic workshop. All the illustrated mosaics are annotated with the exact or approximated dates of the mosaics and some of these mosaics, principally in the Baptistry and the Isidore, Zen and Mascoli Chapels provide examples of fourteenth and fifteenth century mosaics. The commentaries in Caravaggi's text are by different specialists, including Maria Andaloro, and deal with the history and legend of the building, the medieval mosaics and their iconography, and the influence of Byzantine and to a lesser extent, Florentine artists. A history of the conservation of the building and mosaics is also included but again, there is no attention paid to the artistic technology that underpinned the decoration of the building with mosaics, or the cost of the various mosaic programmes.

Research by the nineteenth-century Orvietan archivist, Luigi Fumi, has been published in a volume that concentrates solely on the cathedral of Orvieto, including its lost facade mosaics.<sup>37</sup> Fumi's text contains printed transcriptions of original medieval

---

<sup>35</sup> Otto Demus, *The Mosaics of San Marco in Venice*, Vol. 2 (Chicago: The University of Chicago Press, 1984).

<sup>36</sup> Caravaggi (ed), *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*. Roberto Caravaggi (ed), *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The History, The Lighting*, Vol. 1 (Milan: Gruppo Editoriale Fabbri, 1990).

<sup>37</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*.

documents relating to the processes of building, and mosaic and fresco decoration at the cathedral, as well as his own commentary upon these projects.<sup>38</sup> His commentary is largely chronological and in part, focused on the employment of labour. The detail about the pay of medieval mosaicists, the quality of their work, their complaints and where they were sent to purchase raw materials are matters rarely referred to elsewhere, in other research.<sup>39</sup> However, the theological, economic and political circumstances that prevailed during the Orvietan mosaic programme were not included and there is no indication, for instance, of why the medium of mosaic was used at a time when elsewhere, mosaic decoration was rarely commissioned.

Catherine Harding's thesis and her 1989 article, *The Production of Medieval Mosaics: the Orvieto Evidence* also deal with Orvieto's cathedral.<sup>40</sup> The article is largely based on Fumi's collection of medieval documents, and mostly concerns itself with the manufacturing process that underpinned the mosaic facade of the cathedral. Its approach is more technologically-based than the texts referenced above and also encompasses the organisational structure of the cathedral's Opera del Duomo, an exploration of the way in which tesserae were made in the fourteenth and fifteenth centuries, and the sources of raw materials and tools used in the glass-makers' and mosaicists' workshops. However, like Fumi's work, the article does not set the Orvietan facade mosaics within the context of economic, social, political and theological developments in central Italy and therefore does not offer any insights into why the Opera del Duomo at Orvieto chose to install mosaics between about 1340 and 1380.

Whereas the first type of research concentrates on individual buildings, the second type of research into Italian mosaic art undertakes a wider brief by looking at periods when mosaic art was at its height. Such studies all pre-date the start of my thesis in 1270. Walter Oakeshott's research, for example, largely concerns itself with Early Christian mosaics of the fourth and fifth centuries in the churches of Rome, though his

---

<sup>38</sup> Ibid. pp. 463-476 on "Mosaici e pitture in facciata".

<sup>39</sup> Ibid. p. 467, so, for example, when Pietro di Puccio was paid less than Ugolino in 1386, he said he would cease work unless paid six fiorini a month, that is, approximately the same as an apprentice working in the Bardi bank earned in a year.

<sup>40</sup> Catherine Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', *Dumbarton Oaks Papers*, Vol. 43, 1989. See also Catherine Harding, *Facade Mosaics of the Duecento and Trecento in Tuscany, Umbria and Lazio* (University of London, Ph.D. thesis, 1983).

last chapter considers late- thirteenth century mosaics.<sup>41</sup> However, as with all other texts on Italian mosaics, Oakeshott's text concerns itself almost exclusively with the style, iconography and dating of mosaics. Demus' research on the twelfth-century Norman mosaics of Sicily again focuses on the period when mosaic art was at its height in the island and confines itself to a discussion about the iconography and dating of mosaic work.<sup>42</sup> Neither scholar quantifies how many mosaics were made, or discusses how mosaics were made, the costs of installing them and the wider contextual circumstances that might explain why mosaics were commissioned, rather than other forms of decorative media.

The third type of research into mosaics deals with technical questions about the making of glass. It includes Marco Verità's work on the chemical composition of glass tesserae which gives an insight into where the raw materials for glass were obtained.<sup>43</sup> Archaeologists such as Marja Mendera investigated the remains of medieval glassworks in Italy. Her work has helped to confirm that methods of glass production remained unchanged for at least a millennium prior to approximately 1600. Additionally, her discovery of the remains of glass furnaces in Rome provides some much needed evidence that glass may have been made in the papal city in the fifth century.<sup>44</sup> Gabriella Munaretto and Antonio Batinti detail the industrial history of glass-making in the Umbrian village of Piegara over six centuries, from the time of its foundation in 1321 until the twentieth century.<sup>45</sup> Munaretto and Batinti provide chemical analyses of medieval glass produced in Piegara for the facade mosaics of Orvieto cathedral and details of the three-storied furnaces widely used in the fourteenth and fifteenth centuries. The authors also reproduce modern geological maps showing the reason for Piegara's possession of high quality sand, which led to glass-making in Piegara and the nearby village of Monteleone. However, the authors' decision to create a longitudinal industrial history over six centuries means that there

---

<sup>41</sup> Oakeshott, *The Mosaics of Rome*, p. 134.

<sup>42</sup> See also Borsook, *Messages in Mosaic*.

<sup>43</sup> Marco Verità, "Tecniche di fabbricazione dei materiali musivi vitrei", in *Medieval Mosaics*, ed by Eve Borsook, Fiorella Gioffredi Superbi, and Giovanni Pagliarulo (Milan: Silvana Editoriale, 2000), pp. 47-64.

<sup>44</sup> Marja Mendera, "Produzione vitrea medievale in Italia e fabbricazione di tessere musive", in *Medieval Mosaics* ed by Eve Borsook et al., pp. 97-138.

<sup>45</sup> Gabriella Munaretto and Antonio Batinti, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec* (Perugia: Edizioni Era Nuova, 2007).

is a lack of detailed material about glassmaking in the fourteenth and fifteenth centuries, and the social and political contexts in which it took place.

It is clear that the currently available literature on mosaics does not tell us how much mosaic art was commissioned and carried out between 1270 and 1529, and where it took place. Nor does the literature tell us much about the subject matter depicted or anything about the mosaicists who made mosaics. Apart from Harding, the literature is particularly silent about how mosaics were made, how long they took to make and how much they cost. And importantly, we have no knowledge as to whether, or why mosaic art continued to appeal to patrons who lived through a period that experienced considerable political, religious, demographic and social change. All these missing matters are therefore addressed in my thesis. I start in Chapter 1 by looking at how extensive the use of mosaic was between 1270 and 1529.

## **Chapter 1**

### **The Extent and Location of Mosaic Work in Italy, 1270 to 1529**

#### **Introduction**

Thus far, it has not been known how much mosaic art was created in Italy between 1270 and 1529. Do we thus conclude that there was little or no mosaic art made between the late Middle Ages and the Renaissance, or that it was created, but not remarked upon or recorded by contemporaries? This chapter rests on my research into how much mosaic work was created during this time-frame, and although it cannot provide a full account of the mosaic work created because some was probably destroyed without being recorded, the chapter provides new and crucial information. It continues by examining the profile of demand for mosaic art during the course of the late Middle Ages and early Renaissance. Did demand remain negligible throughout the course of the period, fall, or perhaps rise at some stage? And if mosaics were created, were they patronised solely in Rome and Venice, cities that were respectively well endowed with a heritage of early Christian mosaics and a Byzantine culture that valued mosaic art, or did patrons in other major cities such as Naples, Pisa and Genoa also commission the art form?

#### **The database of mosaic activity**

Essential information for the chapter is detailed in a database of mosaic activity in Italy between 1270 and 1529, and presented in Appendix 1. The database is organised into sections according to the city or regional location, starting with Arezzo and proceeding alphabetically for ease of reference. As previously said, these cities or regions emerged from an initial study of published primary sources, secondary sources and fieldwork as perhaps having experienced mosaic activity between 1270 and 1529. Table 2 sets out where each town, city and region can be found in the database.

**Table 2: Location of the Towns/Cities/Regions in the database of mosaics**

<b>Town/City/Region</b>	<b>Table number in data-base</b>	<b>Page numbers in data-base</b>
Arezzo	11	180
Florence	12	181-193
Lucca	13	194
Orvieto	14	195-200
Perugia	15	201
Pisa	16	202-204
Pistoia	17	205
Rome	18	206-211
Sicily	19	212-215
Siena	20	216
Southern Italy	21	217-218
Venice	22	219-230

Two key problems emerged during the collection of data. One concerns the difficulty of making comparisons of the extent of mosaic activity at different times, and in different cities. This is because mosaics have widely-ranging sizes. Where possible, estimates of the dimensions of mosaics are included in the database. This enables a better comparison of the extent of mosaic activity in different periods or in different cities, though dimensions are not consistently recorded. It is rare for any primary or secondary text to record the area or dimensions of mosaics and estimating sizes without the use of scaffolding during fieldwork is difficult, because mosaics are generally placed high on walls or on curved surfaces.

A second issue concerns the dating of some mosaics, which also makes it difficult to compare the extent of mosaic activity over time. For instance, there is an ongoing, current debate about when the mosaic known as the *Navicella* was installed into the Roman church of Saint Peter.<sup>46</sup> These dating problems emerge because mosaics were rarely dated and mosaicists did not usually sign their work, although there are exceptions, such as Ruscuti's name on the facade mosaic at Santa Maria Maggiore in Rome, dated 1305. Additionally, some mosaics are difficult to date because they were

---

<sup>46</sup> Bram Kempers and Sible De Blaauw, 'Jacopo Stefaneschi, Patron and Liturgist. A New Hypothesis Regarding the Date, Iconography, Authorship and Function of His Altarpiece for Old Saint Peter's', *Mededelingen van het Nederlands Instituut te Rome*, Vol. 12, No. 47, 1987, pp. 83-113.

worked upon over a long period of time. The facade mosaic at the Roman church of Santa Maria in Trastevere was worked upon, renovated and added to over a century and a half. Original, dated records of payments to mosaicists could theoretically provide evidence about when mosaics were completed, but whenever these do exist, they do not usually make it clear for which mosaic the payment was made.<sup>47</sup>

In terms of dating the mosaics, consensual views on the dates when mosaics were installed have been accepted, since attributing and dating mosaics requires very specialist knowledge of changes in style over time and within narrow geographical areas. Descriptions of the mosaics attempt to indicate their size. Thus, an apse mosaic indicates a very large piece of work. Small mosaics would include a lunette, or semi-circular mosaic above a door for example, or a single mosaic in a cycle of mosaics that is composed of multiple scenes.

### **The number of mosaics installed, 1270 to 1529**

We do not know the number of new churches built, or older churches newly extended or reconfigured during this period, and if they were decorated with sculpture, fresco, mosaic or left unadorned. It is therefore not possible to give an idea of what proportion of churches in any city instituted a programme of mosaic decoration between 1275 and 1529. But, from the evidence collected during my research, I have been able to show the number of pieces of mosaic work carried out in the cities listed in Table 2. As previously suggested, probably more mosaics were installed into ecclesiastical buildings between 1275 and 1529 than are recorded in this thesis. It is possible that damage caused by damp, flood, fire, earthquake and human neglect may have led to the disappearance of an unknown number of mosaics. Yet, far from there being little or no mosaic work created between 1270 and 1529, as its absence from studies of Italian art might imply, Table 3 shows that in total there were sixty-eight individual mosaics known to have been installed, and twenty-seven mosaic cycles. Around seventeen repairs are also known to have been made to mosaics already in situ. Although the total extent of mosaic activity between the Middle Ages and the

---

<sup>47</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*. This text prints contemporaneous documents stating payments to mosaicists, but they do not unequivocally state which mosaics the payments are for.



Renaissance will probably never be known, the sample size of one hundred and twelve pieces of mosaic work dating to the period 1270 to 1529 can be considered large enough to permit trends to be identified and for an examination and discussion of these trends to form the basis of this thesis.

**Table 3: Summary of the different forms of mosaic activity organised by city or region**

<b>Town/City/Region</b>	<b>Number of individual mosaics</b>	<b>Number of mosaic cycles</b>	<b>Number of mosaic repairs</b>
Arezzo	1	0	0
Florence	6	11*	3
Lucca	3	0	0
Orvieto	15	0	3
Perugia	1	0	0
Pisa	7	0	1
Pistoia	0	0	1
Rome	18	0	1
Sicily	9	0	4
Siena	2	0	3
Southern Italy	5	0	0
Venice	1	16^	1
<b>Total</b>	<b>68</b>	<b>27</b>	<b>17</b>

A mosaic cycle may be defined as a series of separate mosaics that form part of a single narrative sequence.

\*In the Florentine Baptistery of San Giovanni each tier of the vault (6), and each side of the gallery (4) and the tribune are considered as separate mosaic cycles.

^ In the Venetian basilica of San Marco, each chapel (4), each dome (3), each cupola (2), Baptistery, tribune, façade, sacristy vault, sacristy lunette, choir and apocalypse vault are considered as separate mosaic cycles.

Table 3 shows that between 1270 and 1529, mosaics were used widely across Italy as a decorative medium, from southern Italy to Venice in the north. I will return to this matter of the widespread use of mosaic art later in the chapter.

### **The three phases of mosaic activity**

So, did the patronage of mosaic work remain steady during the long period that stretched from the late Middle Ages into the Renaissance, did it decline in a sudden or gradual way, or did it rise? In order to find out, I constructed Table 4 which shows for each building, in each city/region, the extent of mosaic activity during each decade between 1270 and 1529.

From an analysis of the data shown in Table 4, it becomes evident that the period 1270 to 1529 breaks down into three rather distinct sub-periods. In the first phase, between 1270 and 1329, twenty- seven churches in Italy were decorated with mosaics. This was the shortest phase, but it saw the vast bulk of mosaic activity. Phase 2, a much longer period between 1330 and 1449, saw new mosaics installed into only five churches. This was a much lower rate of mosaic activity compared with that seen between 1270 and 1329. In phase 3, between 1450 and 1529, a considerably shorter period, new mosaics installed into ten churches. This constitutes a small increase in mosaic activity.

Looking more closely at Table 4, it can be seen that between 1270 and 1329, of the twenty-seven churches that had new mosaics installed, twelve were in Rome and Florence. A total of nine churches in Rome were decorated with mosaics during this first phase and what must also be borne in mind is that in some of these churches, the mosaic activity continued over an extended period of time. For example, in Santa Maria Maggiore, a significant amount of mosaic work took place over three decades. In Florence, three churches were decorated with mosaics and in one of them, the Baptistery of San Giovanni, work continued over four decades. Similarly, in Venice, mosaic activity continued over a long period of time at the basilica of San Marco, again for at least four decades. However, the amount of recorded repair work to pre-existing mosaics was low in this first phase. Just two repairs were documented, both in Roman churches.

**Table 4: Buildings with new mosaics and repairs to mosaics by decades from the 1270s to 1520s**

**Key:** New mosaic

### Repair to mosaic

[illegible]

As previously shown, there was a significant reduction in the overall level of mosaic activity between 1330 and 1449. Table 4 shows that during this period of one hundred and nineteen years, only nine churches were decorated with mosaics. In one decade, the 1390s, I have found no evidence for any mosaic activity in Italy. However, during this period of sharply declining mosaic activity, Orvieto and Venice stand out as exceptions to the general trend. The original facade mosaics of Orvieto's cathedral are thought to have been installed over a long period of time, probably between 1330 and 1380, whilst in the Venetian basilica of San Marco, mosaic decoration continued intermittently throughout most of the period between 1330 and 1449, principally in the Baptistry and in the Chapel of San Isidore.<sup>48</sup> There were repairs made to mosaics in five churches in this second phase, notably at the cathedral of Orvieto, where they were required to address poor workmanship during the installation of the façade mosaics a few decades earlier.

In the third phase, between 1450 and 1529, there was a revival in the numbers of mosaics that were commissioned across Italy. New mosaics were installed into ten churches, compared with five in the previous phase. This work occurred particularly in Rome where Agostino Chigi's funeral chapel was opulently decorated with mosaics at the church of Santa Maria del Popolo, in Venice at San Marco, but also in Florence and widespread locations such as Pisa and Palermo. The extent of repair work also increased in this third period. It was carried out in seven churches, compared with five in the previous phase. It is likely that this small upturn in Italian mosaic activity would have been even more pronounced if Lorenzo de' Medici had been successful in fulfilling his plan to install mosaic decoration in the chapel of San Zenobius in the Florentine cathedral of Santa Maria del Fiore.<sup>49</sup>

In summary, it appears from the evidence presented in Table 4 that most of the mosaics were commissioned in the late-thirteenth century or very early-fourteenth century and that thereafter, mosaic art fell into a steep decline for a century and a

---

<sup>48</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', p. 73. The current mosaics were installed in the nineteenth century. See also Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The History, The Lighting*.

<sup>49</sup> Jean Cadogan, *Domenico Ghirlandaio: Artist and Artisan* (New Haven: Yale University Press, 2000), p. 268.

half. The exceptions to this general trend are the cities of Orvieto and Venice. However, from the mid-fifteenth century there was a small upturn in the patronage of mosaics.

The data suggests that the extent of mosaic activity between 1270 and 1529 does not warrant the impression created by general texts on Italian art history that little or no mosaic art was carried out during the period, and that the medium was unimportant. Bearing in mind the potential loss of mosaics, one hundred and twelve pieces of known mosaic work is not insignificant.

### **The balance of mosaic activity**

Figure 1 is derived from the data in Table 4. It shows separately the number of buildings in which new mosaics are known to have been installed and those in which repairs are known to have been carried out during each decade between 1270 and 1529. It gives an impression of the balance between new installations and repairs to mosaics, but should be viewed cautiously. It is not known what the circumstances were that caused repairs to become necessary but some may have addressed deficiencies in earlier mosaic work. These may have included damp-damage or poor mosaic techniques. Repairs may also have been needed to make good damage caused by natural disasters, such as earthquakes, floods and fires. It is likely that repair work may have been viewed as less prestigious than new mosaic art by those responsible for the fabric of churches, and thus less likely to have been recorded.

Figure 1 shows that between 1270 and 1329, repairs only seem to have been made to mosaics in two buildings. The balance between the installation of new mosaics and repairs to pre-existing mosaics therefore seems to be heavily biased towards the former. This trend changed between 1330 and 1449. Figure 1 and Table 4 taken together show an even balance in this period, when there were documented repairs in five buildings and new installations in five buildings. Between 1450 and 1529 there appears to have been a slight increase to seven buildings in which repairs to mosaics appear to have been carried out, and a slightly larger increase to nine buildings in which new mosaics were installed. In general terms, the data therefore tentatively appears to show that repair-work became increasingly significant as time elapsed.

There is no certain explanation for this pattern but perhaps there may have been a growing concern to preserve the art form that resonated with Italy's Early Christian heritage of mosaic art.

### **Geographical trends**

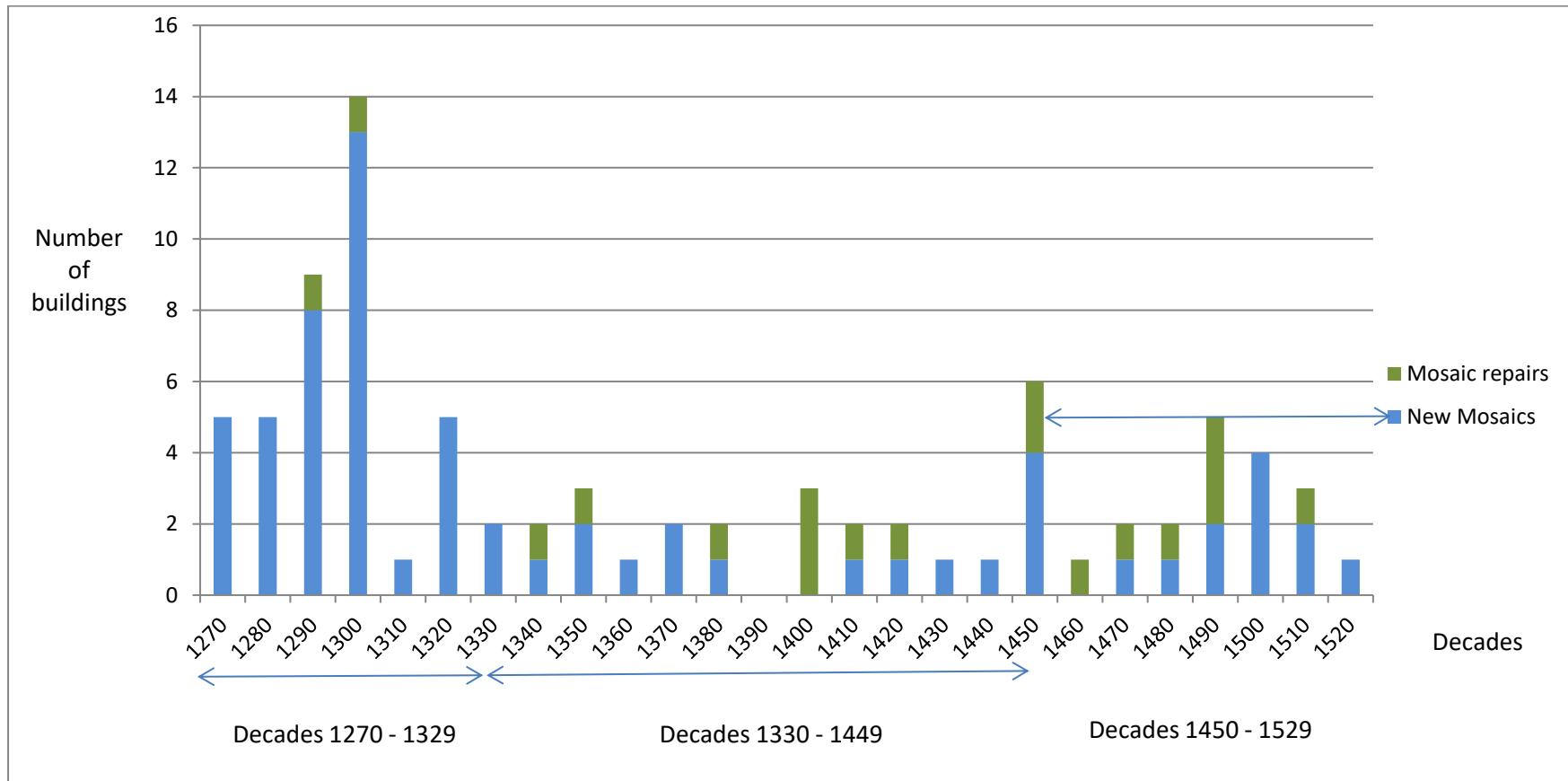
Scholarly opinion, where it exists, holds the view that that mosaic art was most heavily patronised in Rome and Venice, cities where it had been practised for many centuries. An analysis of the database suggests that this hypothesis is largely correct. Rome and Venice figure strongly as cities where mosaics were patronised. However, the data also indicates that the medium was patronised more widely across Italy than is commonly acknowledged.

Figure 2 presents data that assigns those buildings that were decorated with mosaics between 1270 and 1529 into regions. For the purposes of this study, these regions are defined as follows: northern Italy includes those regions now known as Piemonte, Liguria, Lombardy, Emilia-Romagna, Trentino-Adige, Veneto and Friuli. Central Italy is defined as Tuscany, Marche, Lazio and Abruzzo. Southern Italy is defined as Molise, Campania, Puglia, Basilicata and Calabria.

The data shows the importance of Rome in the history of mosaic art during the period prior to the Renaissance. Eleven major Roman churches had mosaics installed between 1270 and 1529 and these include Saint Peter's, San Giovanni in Laterano, Santa Maria Maggiore and Santa Maria in Trastevere. Apart from two of these buildings, all of them were decorated between 1270 and 1329.

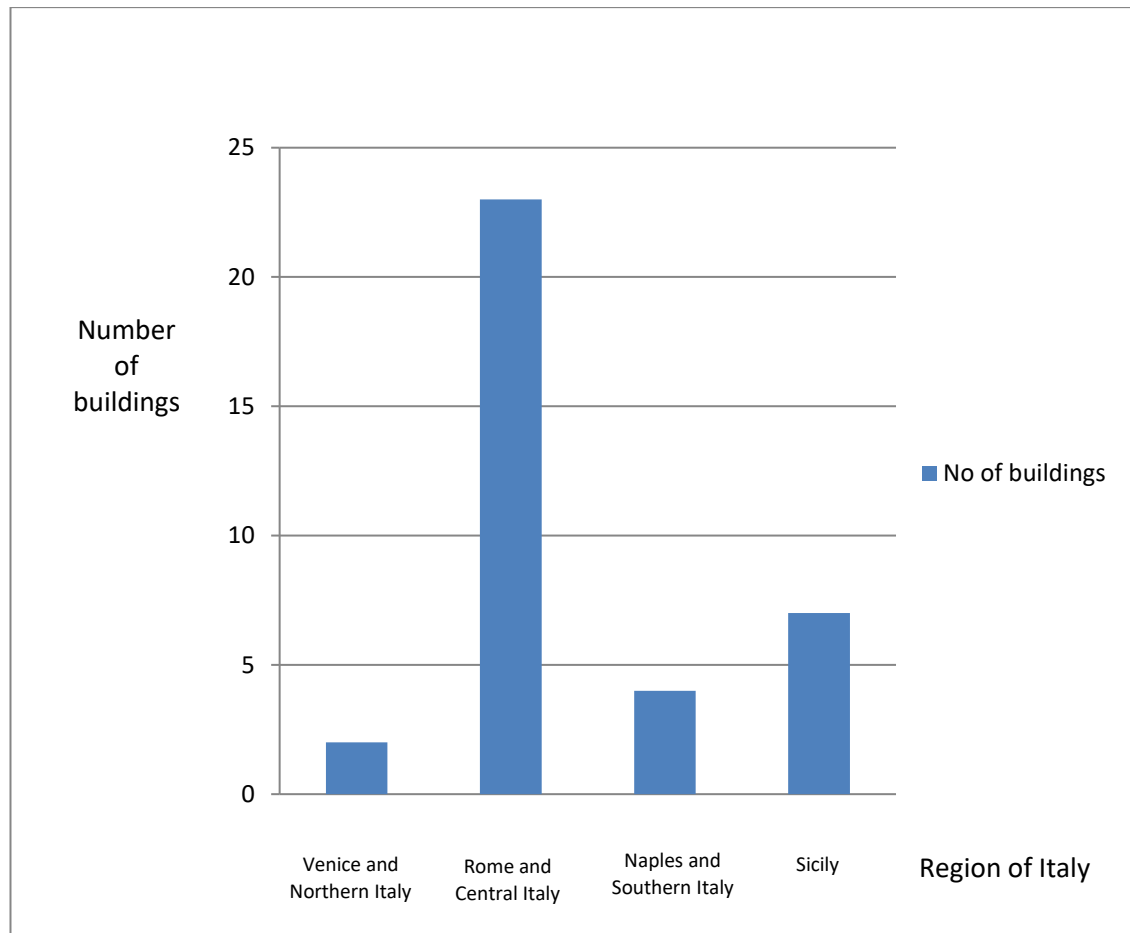
Venice was also important in the history of mosaic art in the period prior to, and during the Renaissance. In the basilica of San Marco, the Baptistery's frescoes were replaced with mosaics in the mid-fourteenth century, and the vault and walls of the newly-built Chapel of San Isidore were wholly decorated with mosaics around the same time. In the fifteenth century, the Chapel of the Mascoli was given sumptuous

**Figure 1: Number of buildings where mosaic activity occurred during each of the decades from 1270 to 1529, showing the balance between new installations and repairs.**



mosaic decorations and at the beginning of the sixteenth century, the church of San Salvatore commissioned mosaic decoration for a side apse. Although only these two Venetian buildings were decorated with the medium, the extent of mosaics used in them was considerable.

**Figure 2: Number of buildings with documented mosaics installed between 1270 and 1529 in four regions of Italy**



Mosaics were also used widely across Italy. In Sicily, mosaics were used to decorate seven buildings. However, the impression given by Figure 2 can be misleading as these Sicilian mosaics were all very small, quite unlike the larger and more prestigiously placed mosaics in Rome, Florence, Arezzo, Orvieto, Siena, Pisa, Venice and elsewhere. In Naples, an apse in the cathedral was decorated with mosaic, and cathedrals elsewhere in the south of Italy were also decorated with the medium. These include cathedrals in Amalfi and Salerno. Venice apart, what Figure 2 most clearly shows is the domination of Rome and central Italy in the patronage of mosaics.



When the cities where mosaic activity is known to have occurred between 1270 and 1529 are mapped onto the peninsula of Italy, the domination by Rome and cities in central Italy becomes even clearer.

**Figure 3: Map of Italy showing cities where mosaics are known to have been installed between 1270 and 1529**



**Key: — Via Francigena (a main pilgrimage route)**

The map set out in Figure 3 shows that mosaics were used to decorate the walls and ceilings of buildings in 17 Italian cities between 1270 and 1529. My literature and field searches did not discover the use of mosaic during this period for the decoration of walls and ceilings in buildings in rural locations, or the eastern regions of Italy, apart from in Venice.<sup>50</sup> What Figure 3 shows is that the bulk of mosaic activity as currently known appears to have taken place in cities on or near to the western coastline of

<sup>50</sup> However, many examples of church furniture embellished with mosaics can be seen in southern Italian village churches, including Sessa Arunca and Minturno, for example. Here, pulpits, altars and tall Paschal candlestick holders carved in stone are decorated with mosaic tesserae placed in geometric patterns (Fieldwork).

Italy, especially of central Italy. This pattern is interesting, though it is not a pattern that is easy to explain. However, all the cities shown in Figure 3 seem to have shared at least one common attribute. They all seem to have been wealthy, though the reasons for their wealth may have varied. For example, the western port of Amalfi had become wealthy as a result of crusaders' visits whilst *en route* by sea to the Holy Land, and the concomitant ship building and repair business. Pisa's wealth and that of the Sicilian ports rested on international trade.<sup>51</sup> Inland cities linked to the western seaboard by rivers, such as Florence, also became wealthy through international trading, whilst other cities such as Siena, Orvieto and Lucca grew in wealth as a result of their positions on important pilgrimage routes, such as the Via Francigena.<sup>52</sup> This was the medieval pilgrimage route for merchants, clerics and artists travelling between places north of the Alps and Rome and it would have been a busy thoroughfare, especially before the papal court transferred to France in 1304. Lucca, Siena and Rome are three examples of cities that probably benefitted from the wealth that was brought within its walls by travelling traders, pilgrims and officials who, indirectly at least, may have helped the financing of mosaic commissions. Other cities such as Anagni, Siena and Perugia, benefitted from the wealth associated with being either the birth-place, or the preferred summer residence of popes. Another attribute shared by the cities where buildings were decorated with mosaics is that they all possessed large, major churches such as the ancient basilica of Santa Maria Maggiore in Rome, the cathedral of San Andrea in Amalfi and the cathedral of Santa Maria del Fiore in Florence.

It is also notable that over half of the cities shown in Figure 3 that saw mosaic work carried out between 1270 and 1529 were ports, or very near to ports on the Adriatic and Tyrrhenian coasts of Italy. They include Amalfi, Salerno, Naples, Messina, Monreale, Palermo, Pisa and Venice. Chapter 5 will return to the significance of trading ports figuring so heavily amongst the places where mosaic work was carried out, but the wealth generated from international trade and their exposure to foreign cultures may have been amongst the most pertinent factors.

---

<sup>51</sup> Andrea D'Antuono, *Amalfi e la sua Cattedrale* (Salerno: De Luca Editore, 2004), p. 13.

<sup>52</sup> 'Vie Francigene (Associazione Europea delle Vie Francigene), <http://www.viefrancigene.org/en/> [Accessed 9 January 2016].

The absence of cities in Figure 4 lying to the east of the central Apennine mountain range is evident and may be explained in two possible ways, the power of Venice and socio-economic conditions in the area. Venetian domination of settlements along the Adriatic coastline, with the exception of the port of Ancona, may have kept coastal towns and cities from developing their trade, and poorer than might otherwise have been the case.<sup>53</sup> Inland from the Adriatic coast, peasant populations were subjugated by largely absent feudal lords and troubled by lawless brigands.<sup>54</sup> In these troubled areas, poverty resulted from the existence of a subsistent, agrarian economy. The area contrasts with the developing, wealthier areas lying near or on the western seaboard of Italy where mosaic art is known to have been practised between 1270 and 1529.

A similar lack of documented mosaics applies to southern Italy, where only one mosaic is recorded as having been installed in Naples, a wealthy, international port, but where the culture was set by the French and Spanish ruling dynasties.<sup>55</sup> Although the monarchs of the *Regno* attracted leading cultural figures to Naples, for example Petrarch, and painters like Giotto and Cavallini, foreign rulers' preferences seem to have lain in sculpture and fresco, rather than mosaic.<sup>56</sup> Beyond Naples, in the nearby port of Amalfi, the facade of the cathedral was decorated with mosaic and further along the coast at Salerno, a side apse was decorated with the medium. Nearer to Rome at Pope Boniface VIII's birthplace at Anagni, a small mosaic was used to decorate an external statue of him.<sup>57</sup> Nowhere in the south of Italy do we find the kind of monumental mosaics that were installed in the mercantile cities of Rome, Florence, Venice, Pisa and Lucca. It may have been the case that the adverse economic, climatic and socio-political conditions in rural southern Italy did not create the conditions that favoured the artistic patronage of large, wall or ceiling-based mosaics. The vast land-

---

<sup>53</sup> Gino Luzzatto, *An Economic History of Italy*, trans. by Philip Jones (London: Routledge and Kegan Paul, 2006), p. 164.

<sup>54</sup> Ibid. p. 165.

<sup>55</sup> Cordelia Warr and Janis Elliott, "Introduction: Reassessing Naples 1266-1713", in *Art and Architecture in Naples, 1266-1713*, ed by Cordelia Warr and Janis Elliott (Chichester: Wiley-Blackwell, 2010), pp. 2-9.

<sup>56</sup> Tanja Michalsky, "The Local Eye: Formal and social distinctions in late quattrocento Neapolitan tombs", in *Art and Architecture in Naples 1266-1713*, ed by Cordelia Warr and Janis Elliott (Chichester: Wiley-Blackwell, 2010), pp.62-82 and Helen Mills, "The face is a mirror of the soul: Frontispieces and the production of sanctity in post-Tridentine Naples", in *ibid.* pp. 125-151 where the authors discuss the sculpted tombs and frescoes commissioned by patrons in Naples. Giotto and Cavallini completed fresco commissions in Naples.

<sup>57</sup> Pope Boniface VIII (Benedetto Caetani), 1294-1303.

mass of southern Italy and inland Sicily suffered impoverishment and decay caused not only by its arid soil and climate, but like regions east of the Apennines in northern Italy, by small-scale, isolated subsistence farming and absentee landlords.<sup>58</sup> The circumstances were exacerbated in southern Italy by the political and social turmoil caused by the change from French to Spanish rule, and baronial insurrections.<sup>59</sup>

There are no documented mosaics known to have been made between 1270 and 1529 in the northern regions of Italy, apart from Venice, a city that was culturally influenced by its trade connections with Byzantium and lands surrounding the eastern Mediterranean Sea. The absence of mosaics in northern Italy is difficult to explain, for although some areas such as Piemonte were almost entirely agricultural with very little wealth in its settlements, cities such as Genoa and Milan had prosperous economies.<sup>60</sup> These were based on a variety of manufacturing industries, especially high-cost silk production, with additional wealth emanating from their trading and banking enterprises.<sup>61</sup> Thus whilst it might seem that the possession of wealth had some bearing on whether or not cities patronised mosaic decoration, it also appears that other factors must have been influential. Possible factors that perhaps caused patrons in these cities not to commission mosaic art will form the bulk of the discussion in Chapter 6.

## Conclusion

Although it is not known what proportion of churches chose mosaic rather than other forms of decoration between 1270 and 1529, my research has shown that at least one hundred and twelve pieces of known mosaic work were carried out in Italian ecclesiastical buildings during the period. The figure is, furthermore, very probably an underestimate of the true extent of mosaic activity. The database suggests that this period saw three phases of mosaic activity. The first phase lasted between 1270 and

---

<sup>58</sup> The *Regno* is an alternative name for the Kingdom of Southern Italy and Sicily.

<sup>59</sup> Warr, *Art and Architecture in Naples, 1266-1713*, p. 6. Aragonese (Spanish) rule started in 1416.

<sup>60</sup> Luzzatto, *An Economic History of Italy*, p. 107. For example, Milan in the late thirteenth century had at least 100 workshops in the city making body armour.

<sup>61</sup> Franco Franceschi, "The Economy: work and wealth", in *Italy in the Age of the Renaissance*, ed by John M. Najemy (Oxford: Oxford University Press, 2004), p. 128. Rivalry between Genoa and Venice resulted in the former's military defeat but despite being over-shadowed by Venice, Genoa was still employing some 25,000 citizens in the silk trade around 1500.

1329 and saw the greatest extent of mosaic activity, with installations of monumental mosaics in Rome and elsewhere, and many cycles of mosaics installed in Florence and Venice. The next phase between 1330 and 1449 witnessed a considerable decline in mosaic activity except in Orvieto and Venice, but with repairs seemingly becoming a little more evident. During the final phase between 1450 and 1529, there was a small, but significant increase in mosaic work, both in terms of new installations and repairs. Mosaic art thus appears to have played enough of a part in Italian artistic production to lead to the conclusion that the medium should have a place in the history of Italian art between the late Middle Ages and the Renaissance.

Also of note is the fact that the mosaic decoration of buildings appears to have been carried out more widely across Italy during the Middle Ages and early Renaissance than might initially have been thought. Putting aside Venice and Rome, there is evidence of considerable mosaic activity in western, central Italy. There are many complex reasons for the chronological and geographical trends mentioned in this chapter, and they will form part of the discussion in Chapter 5.

## Chapter 2

### The Production of Mosaics

#### Introduction

There has been no comprehensive research into the technology of how mosaics were made in Italy between 1270 and 1529. The chapter seeks to redress this omission because the technology used in the production of mosaics may have affected at least two important aspects of mosaic art: the cost of mosaic work and the time taken to produce it. Either individually or together, these two aspects may suggest, at least in part, why there seems to have been an overall, declining demand for mosaics between 1270 and 1529.

A large mosaic, such as the one created for the apse of San Miniato al Monte near Florence in the late thirteenth century, was composed of thousands of small pieces of glass called tesserae. They were made individually, since they are not regular in shape, nor standard in size. Some tesserae are square, whilst others are rectangular, or even irregular. Each glass tessera is small, approximately one square centimetre in area and perhaps half a centimetre thick. The tesserae are coloured, with gold ones predominating. Other colours that figure in the apse mosaic are blue, light grey, dark green, a rusty-red and black, which was used for the lettering. They constitute a rather limited palette of colours as there are no pure white, brown, yellow, orange, pink, mauve or clear red tesserae in the mosaic. The tesserae were attached to the curved wall of the apse and not set flat, but angled so that light could reflect from their shiny, glass surfaces. The mortar between the tesserae is clearly visible and the weight of the thousands of tesserae suggests that some effective techniques must have been used to prevent the tesserae from subsequently detaching themselves from the bed of mortar that had been applied to the wall.<sup>62</sup>

---

<sup>62</sup> Paola Pogliani and Claudio Seccaroni, *Il Mosaico Parietale* (Florence: Nardini Editore, 2010), p. 11.

### **Technology and its links to the cost of mosaics and time taken to produce them**

The visible clues about the production of the late thirteenth-century apse mosaic in the church of San Miniato al Monte point towards a need for a discussion of a number of issues. These include how glass was made and if there were any difficulties associated with its manufacture that might have limited the scale of its production and kept both glass, and therefore mosaics, costly. To do this, the chapter discusses the sources of raw materials, the size and design of furnaces, and the job of glass-maker. The discussion then moves on to consider the challenging task of colouring glass, in order to see if the process was improved in any way between 1270 and 1529, thereby enabling the range of colours to be extended beyond those used in the apse mosaic of San Miniato al Monte. This is followed by a consideration of how tesserae were produced and attached to the walls and ceilings of churches in order to create a mosaic. The purpose is to see whether or not the processes associated with mosaic art remained unaltered, causing the medium to remain costly and slow to produce. If the processes remained unaltered, then cost and time might provide at least a partial explanation for the declining demand for mosaic art that was discussed in Chapter 1.

### **Glass-making in Italy**

Glass was made in two stages. Raw glass was made from basic raw materials such as sand, plants and minerals, and although it was made in Italy, its importation was also well established. There is evidence of the importation of raw glass from the Levant.<sup>63</sup> Raw glass was then re-worked, by melting and colouring it, and then fashioned into a range of finished products such as drinking vessels and tesserae. This chapter deals with the whole process from the acquisition of basic raw materials to the production of coloured and metallic tesserae.

By 1270, there was already a long tradition of glass-making from the basic raw materials in Italy. An archaeological survey of the area surrounding a Roman villa that

---

<sup>63</sup> Liz James, 'Byzantine glass mosaic tesserae: some material considerations', *Byzantine and Modern Greek Studies*, Vol. 30, No. 1, 2006, p. 33, where she argues that during the sixth to tenth centuries glass for tesserae used in mosaics in lands known today as Greece and Croatia, for example, were made from raw glass transported from the eastern Mediterranean. The evidence comes from examinations of the cargoes of sunken ships.

was in occupation between the 3<sup>rd</sup> and 5<sup>th</sup> centuries at Aiano-Torraccia di Chiusi in Tuscany, revealed that it had been used as a glass-making site. The site is important because it reveals the complexity of the glass-making process compared with the production of other types of materials for works of art, such as altarpieces or terracotta tin-glazed reliefs.<sup>64</sup> The site contained a series of workshops for the manufacture of glass including a furnace, a nearby controllable water system, a smithy for making glass-working tools, a brazier for heating them and an area where minerals were excavated. It also contained evidence of the reuse of waste glass in the form of discarded tesserae in order to make new batches of glass. Other fifth-century glass furnaces have also been found in the Crypta Balbi in central Rome, and tenth-century furnace sites have been discovered on the island of Torcello, and in Campania, Liguria and Tuscany.<sup>65</sup> At the end of the thirteenth century, glass-making sites were spread geographically across Italy, with the most well-known located on the island of Murano.<sup>66</sup> In Tuscany alone, a concentration of twenty-four glass-making sites has been located. It is notable that the area had a number of large mosaic projects identified in the database.<sup>67</sup> The fact that there have been relatively low numbers of glass-making sites discovered south of Rome may reflect the amount of archaeological research in that region, or alternatively, may reflect the region's poor economic circumstances. It is notable however, that very few mosaics were installed south of Rome between 1270 and 1529.

The glass-makers in operation around 1270 seem to have employed much the same technology used in earlier times at Aiano-Torraccia di Chiusi. This was largely because 1270 pre-dated the discovery of thermometers to gauge the temperature of furnaces, and the use of valves to control the amount of oxygen that entered them. This means

---

<sup>64</sup> Marco Cavalieri, 'Lombardic Glassworking in Tuscany', *Materials and Manufacturing Processes*, Vol. 24, No. 9 2009.

<sup>65</sup> Marja Mendera, 'Produzione vitrea medievale in Italia e fabbricazione di tessere musive', in *Medieval Mosaics* ed by Eve Borsook et al., pp. 122, 201. Tesserae were also found at the Crypta Balbi and these are now displayed in its museum. See also p. 101 for the exact locations of these tenth and eleventh century sites.

<sup>66</sup> Paul Hills, "Venetian Glass and Renaissance Self-fashioning", in *Concepts of Beauty in Renaissance Art*, ed by Francis Ames-Lewis and Mary Rogers (Aldershot: Ashgate, 1998), p. 166. Paul Hills says that the Queen of France visited the Murano glass-works in 1502 and that such visits became protocol for important travellers to Venice.

<sup>67</sup> Ibid. p. 130.



that furnaces continued to operate in an unpredictable fashion, sometimes wasting raw materials and the labour devoted to the task. The question is whether or not the technology underlying the production of mosaics changed between 1270 and 1529, thereby allowing glass tesserae to be produced with greater efficiency, more speedily, and perhaps more cheaply.

### **Materials for glass-making**

In 1270, Italian glass-makers made raw glass from a wide range of natural resources. It is significant that none of these materials could be chemically analysed for impurities. This inability to determine the exact composition of raw materials and identify the types and amounts of impurities remained a problem for glass-makers throughout the period. Table 5 shows the materials used in glass-making, their function in the manufacturing process and, where known, their source.

The major ingredient of glass was silica. However, not all sand could be used, either because the particles were of an uneven size and would not melt at the same rate, or because the sand was too contaminated with impurities such as iron. Sometimes, local river sand could be used when the underlying topography resulted in good quality sand. Glass-making was established in the mid-thirteenth century at Piegara in Umbria, and rested on good quality sand from the delta of the River Nestore.<sup>68</sup> When better quality glass was wanted, fine-grained sand was imported from beaches on the Levant or at Trapani on the west coast of Sicily. By the mid-fifteenth century, we can see glass with fewer flaws such as bubbles and striations (disfiguring “strings” of glass) being produced, at least in Venice. The Venetians’ quest for excellent quality glass caused them to source very pure silica in the form of powdered quartz pebbles from the Ticino river-beds, close to Verona and Pavia.<sup>69</sup> Although these pebbles had to be roasted and ground using water-mills, the resulting sand contained far fewer impurities than either river or beach sand. One merchant from Verona promised delivery of as much as 7.5 tons of powdered quartz to Venice in the mid-fifteenth century and although its use

---

<sup>68</sup> Munaretto, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec.*, p. 16.

<sup>69</sup> Rasmussen, 'Advances in 13th Century Glass Manufacturing and their Effect on Chemical Progress', p. 29. Quartz pebbles are 98% silica and their purity ensured that glass made from stones was not so discoloured (i.e. green).

**Table 5: Some sources of materials used in making glass for tesserae in Italy, 1270 to 1529**

Name	Material	Source of material, where known		Function	Ref
		Italy	Abroad		
1. Silica (sand)	Beach sand	Sicily and Marghera (Venetian lagoon)	Istria, Levant	Basic ingredient of glass	70
	Quartz pebbles	Ticino River near Pavia, Lombardy and Verona, Veneto			71 72
	River sand	River Nestore at Piegara, Umbria and River Voltorno, Campania			73 74
2. Alkali	Plant - salsola kali ash	Sicily	Levant, Egypt, Syria	Basic ingredient of glass	75
	Fern ash	Tuscany			76 77
	Lime (calcium oxide) or calcium carbonate				78
3. Cullet	Waste glass	Murano or locally, via glass pedlars	Cities near Mediterranean Sea e.g. Tripoli, Antioch and Alexandria	To aid fusion of basic ingredients	79 80 81

<sup>70</sup> David Jacoby, 'Raw Materials for the Glass Industries of Venice and the Terraferma, about 1370 - about 1460', *Journal of Glass Studies*, Vol. 35, 1993, p. 76.

<sup>71</sup> Seth Rasmussen, 'Advances in 13<sup>th</sup> Century Glass Manufacturing and their Effect on Chemical Progress', *Bulletin of Historical Chemistry*, Vol. 33, No. 1, 2008, p. 29.

<sup>72</sup> W. Patrick McCray, *Glassmaking in Renaissance Venice - The Fragile Craft* (Aldershot: Ashgate, 1999), p. 102.

<sup>73</sup> Glossary, "Sand", in *Medieval Mosaics*, ed by Eve Borsook et al., p. 201.

<sup>74</sup> Munaretto, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec*, p. 16.

<sup>75</sup> Rasmussen, 'Advances in 13<sup>th</sup> Century Glass Manufacturing and their Effect on Chemical Progress', p. 29.

<sup>76</sup> James, 'Byzantine glass mosaic tesserae: some material considerations', p. 33.

<sup>77</sup> Munaretto, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec*, p. 60.

<sup>78</sup> Glossary, "Calcium oxide", in *Medieval Mosaics*, ed by Eve Borsook et al., p. 188.

<sup>79</sup> McCray, *Glassmaking in Renaissance Venice - The Fragile Craft*, p. 47.

<sup>80</sup> Marco Verità, 'Technology and Deterioration of Vitreous Mosaic Tesserae', *Reviews in Conservation*, Vol. 1, 2000, p. 4.

<sup>81</sup> James, 'Byzantine glass mosaic tesserae: some material considerations', p. 33.

Name	Material	Source of material, where known		Function	Ref
		Italy	Abroad		
4. Decolourants	Manganese oxide	Piedmont, Vicenza, Liguria and Tuscany	France, Germany and Catalonia	To remove natural green colour caused by iron in raw materials	<sup>82</sup> <sup>83</sup>
	Antimony				<sup>84</sup>
	Arsenic				<sup>85</sup>
5. Colourants	Lead oxide			To give greater surface brilliance	<sup>86</sup>
	Lead oxide with metallic tin or tin oxide			Range of yellows depending on mix	<sup>87</sup>
	Manganese oxide			Violet to brown depending on amount	<sup>88</sup>
	Cobalt oxide		Germany	Blue	<sup>89</sup>
	Copper (Cuprous oxide)			Green/pale blue depending on amount	<sup>90</sup>
	Copper metal			Red	<sup>91</sup>
	Gold leaf			To make gold tesserae	<sup>92</sup>
	Silver leaf			To make silver tesserae	<sup>93</sup>
6. Opacifiers	Calcined lead and tin (oxides)		Spain	Used to make glass more opaque	<sup>94</sup>

<sup>82</sup> Jacoby, 'Raw Materials for the Glass Industries of Venice and the Terraferma, about 1370 - about 1460', p. 77.

<sup>83</sup> Glossary, "Decolourants", in *Medieval Mosaics*, ed by Eve Borsook et al., pp. 191, 192.

<sup>84</sup> Ibid. p. 191.

<sup>85</sup> Ibid. p. 192.

<sup>86</sup> Verità, 'Technology and Deterioration of Vitreous Mosaic Tesserae', p. 8.

<sup>87</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The History, The Lighting*, p. 182, which shows the range of yellow tones in the mosaic of the coat of arms of Cardinal Zen.

<sup>88</sup> Daniela Stiaffini, *Il Vetro nel Medioevo* (Rome: Fratelli Palombi Editori, 1999), p. 18.

<sup>89</sup> Eliyahu Ashtor, 'The Factors of Technological and Industrial Progress in the Later Middle Ages', *The Journal of European Economic History*, Vol. 18, No. 1, 1989, p. 22.

<sup>90</sup> Borsook, *Medieval Mosaics*, glossary, p. 190.

<sup>91</sup> Ibid. p. 190.

<sup>92</sup> Theophilus, *On Divers Arts. The Foremost Medieval Treatise on Painting, Glassmaking and Metalwork*, trans. by Cyril Stanley Smith and John G. Hawthorne (New York: Dover Publications, 1979), pp. 60, 61.

<sup>93</sup> Ibid. pp. 60, 61.

<sup>94</sup> Borsook, *Medieval Mosaics*, p. 188.

allowed better glass to be made, it is probable that this was a far more expensive form of silica than locally obtained river sand.<sup>95</sup>

An alkali was a second basic ingredient of glass. Tuscan glass-makers around 1300 used locally obtained ferns as an alkali. These had to be prepared by repeatedly washing and burning them to an ash in an attempt to purify them.<sup>96</sup> However, analytical techniques had not been developed that allowed impurities to be identified and quantified, so the impurities remaining in ferns gave glass a natural green colour. In the fifteenth century, the Venetians turned to the plant *salsola kali* instead of ferns as an alkali. They imported *salsola kali* from where it grew in Sicily, the Levant or Egypt because it provided a purer form of alkali.<sup>97</sup> Hence once again a raw material was used that incurred transport costs. Perhaps to counteract the rising cost of making glass, as well as to give themselves a competitive advantage over rival glass-makers in other Italian cities, the Venetians made exclusive-rights contracts with Syrian merchants and attempted to prohibit the re-sale of *salsola kali* ash from Venice to all other cities in Italy.<sup>98</sup>

Waste glass, or cullet, was sometimes added to the silica and alkali to help them to fuse together in the furnace and this may have been obtained locally. It is clear from archaeological evidence that discarded tesserae were sometimes used as a form of cullet in the fifth century at the site at Aiano-Torraccia in Tuscany.<sup>99</sup> Another source of cullet was itinerant pedlars who sold products in exchange for broken glass that they sold on to glass producers. This practice is well documented from Roman times up until the eighteenth century in Italy, but it could not have satisfied all of the glass-

---

<sup>95</sup> McCray, *Glassmaking in Renaissance Venice - The Fragile Craft*, p. 102.

<sup>96</sup> Munaretto, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec*, p. 61. The fumes given off by ferns during burning were toxic and this had to be done in more remote places, away from habitation.

<sup>97</sup> Eliyahu Ashtor and Guidobaldo Cevidalli, 'Levantine Alkali Ashes and European Industries' *The Journal of European Economic History*, Vol. 12, No. 3, 1983, pp. 487-491. *Salsola kali* is a member of the chenopodiaceae family. It is a small bush whose chemical composition varies according to the soil in which it grows, the local climate and which part of the plant had been picked. Therefore, knowing the source of the *salsola kali* was important to glass-makers.

<sup>98</sup> Jacoby, 'Raw Materials for the Glass Industries of Venice and the Terraferma, about 1370 - about 1460', p. 104.

<sup>99</sup> Cavalieri, 'Lombardic Glassworking in Tuscany', p. 1024. Sometimes discarded tesserae were also used as a colourant.

makers' need for cullet.<sup>100</sup> It is apparent that cullet was also imported from foreign cities, including Tripoli, Antioch and Alexandria.<sup>101</sup> However, the disadvantage of imported cullet lay not only in its greater cost, but also in its unknown constituent ingredients and how it might react in the furnace with the other ingredients. If glass emerged from the furnace with defects such as bubbles and striations, this would have rendered the glass unusable and furthermore, wasted resources and the labour entailed in its manufacture.

The rising dependency of Italian glass-makers on imported sources of basic raw materials is significant. It must have raised the costs of glass production and introduced an element of uncertainty about their chemical reaction with other materials in the furnace. These foreign sources are shown in the map (Figure 4).

Figure 4 shows that Italian glass-making in the period 1270 to 1529 used imported raw materials from many sources. The extent of the trade grew from the mid-fifteenth century, as Venice pursued her policy of producing high quality glass. Raw materials came from countries that bordered the eastern Mediterranean Sea, including Egypt and Syria, from northern Africa, countries bordering the eastern Adriatic Sea, from western countries such as Spain, and from France and Germany to the north of the Alps. The acquisition of these raw materials from such diverse and distant locations made glass-making a more complex and costly industry than others, such as ceramics for example, which relied on a narrower range of raw materials from local sources.

The potential sources of materials used in Italian glass-making between 1270 and 1529 and derived from Table 5 are shown mapped onto areas surrounding the Mediterranean Sea.

---

<sup>100</sup> Ibid. p. 1024.

<sup>101</sup> James, 'Byzantine glass mosaic tesserae: some material considerations', p. 33, where she argues that during the sixth to tenth centuries, glass for tesserae used in mosaics installed in Greece and Croatia, for example, were made from raw glass transported from the eastern Mediterranean.

**Figure 4: Potential foreign sources of materials used for glass-making in Italy 1270 to 1529**



The map suggests that Italian glass-making was dependent on materials from locations around the Mediterranean Sea and that some were sourced from north of the Alps. As a consequence, these materials would have incurred transport costs.

### Other resources

Table 6 shows a range of other resources required for the manufacture of glass tesserae.

**Table 6: Other resources used for glass-making in Italy, 1270 to 1529**

<b>Resource</b>	<b>Material and source where known</b>	<b>Purpose</b>	<b>Ref</b>
1. Furnace	Stone (from quarries in the Dolomites e.g. Bolzano.) Also, Custoza near Vicenza	Building material	Charleston p. 11 - 14 Jacoby p. 79
	Brick (clay from Valenza)	Building material	Jacoby p. 78
	Clay (Italy and Constantinople)	For lining furnace	McCray p. 111
2. Fuel	Wood (alder and willow preferred)	Heating furnace	Munaretto p. 60
3. Water	Rivers, lagoons, lakes, reservoirs.	1. Washing raw materials 2. Washing tools 3. Rapid cooling of roasted quartz pebbles and grinding in a water mill	Munaretto p. 21
4. Tools	Clay pots (clay from Valenza and Constantinople)	To contain glass making ingredients in furnace	Munaretto p. 42, 43, Jacoby p. 76, 78
	Metal pot holder	To insert and withdraw clay pots from furnace	
	Metal blow pipe	To blow glass into sheets	
	Metal pincers	To hold glass sheets	
	Metal cutters	To cut glass sheets	
5. Labourers		To add wood and stoke the furnace. Wash ingredients.	
6. Master glass maker		To measure out glass making ingredients. Supervise furnace. Colour glass. Blow glass into sheets for tesserae	

## Furnaces

The design and size of furnaces barely changed between at least the eleventh and seventeenth century. This means that any problems associated with glass-making in earlier centuries, such as a limitation of the amount of glass that could be produced at any one firing, persisted throughout the late Middle Ages and early Renaissance.

Illustrations of Italian furnaces and glass-makers, dating between 1023 and 1540, show very similar designs and small dimensions. A manuscript of 1023, the *De Universo* by Hrabanus Maurus in the library at Montecassino, shows an illustration of a three-storied furnace made of large rectangular stones of a type that were resistant to heat (Plate 1, i).<sup>102</sup> The lower storey contains a stoke-hole whose function was to allow the furnace to be fed with wood to keep the furnace burning. The second storey provided a space for the ceramic pots of sand and alkali to be placed, so they could fuse together in the heat of the fire below. The third storey at the top of the furnace provided a space for glass items to anneal and cool gradually so they did not shatter.

A fifteenth-century illustration shows very little change in the furnace design, size and building material (Plate 1, ii).<sup>103</sup> The furnaces were still made of heat resistant stone and had three stories for the same functions of firing, fusing the silica and alkali, and annealing. It seems that the size of furnaces remained small as this made it easier for glass-makers to control the temperature of the furnace at a time before thermometers had been invented.<sup>104</sup> An estimate of furnace size given by Peder Mansson, a Swede living in Rome between 1508 and 1524, was four metres in diameter.<sup>105</sup>

An illustration of a furnace published in Venice in 1540 by Vannoccio Biringuccio in *De la Pirotechnia*, shows that in the sixteenth century, the design and size of the furnace continued to be unchanged (Plate 1, iii).<sup>106</sup> Biringuccio's illustration shows a stoke-hole in the lower storey to enable the fire to be fed with wood, apertures in the middle storey through which the pots of silica and alkali could be inserted, and an annealing

---

<sup>102</sup> Robert Charleston, 'Glass Furnaces through the Ages', *Journal of Glass Studies*, Vol. 20, 1978, p. 11.

<sup>103</sup> Ibid. p. 13.

<sup>104</sup> Cavalieri, 'Lombardic Glassworking in Tuscany', p. 1025.

<sup>105</sup> Charleston, 'Glass Furnaces through the Ages', p. 12. Charleston quotes from Peder Mansson's "Glaskonst" at length. Four metres is the author's conversion of measurements given by Mansson.

<sup>106</sup> Ibid. p. 14.



chamber at the top of the furnace. The only changes shown by Biringuccio are that the furnace's building material is now brick, strengthening ribs have been added to the circular structure and a screen has been erected to protect the glassworkers from the glow and heat of the fire. Agricola's illustration of a furnace in 1556 in *De Re Metallica* shows very little change from the previous design and size of furnaces (Plate 1, iv).

Glass furnaces throughout the period 1270 to 1529 remained lined with heat-resistant clay, much of it imported from Constantinople. This lining helped to maintain temperatures of 800 degrees Celsius in the furnace for the several hours required to melt the pre-prepared silica, alkali and carbonates to obtain a homogeneous mass called the frit.<sup>107</sup> The frit was subsequently ground into fine particles, perhaps mixed with cullet, colouring and decolouring materials, and opacifiers, and melted at higher temperatures of over 1000 degrees Celsius until a workable glass was obtained. It was a process that could take several days and the length of time taken to produce glass would not seem to have shortened between 1270 and 1529, or to have become any more reliable.

There appears to have been no change in the type of fuel used in furnaces between 1270 and 1529. The only available sources of fuel for furnaces during this period were dry wood and dung. These were both less efficient than coal and large quantities of wood would have been needed.<sup>108</sup> It has been estimated that to fire up medieval furnaces to 1000 or 1100 degrees Celsius, as much as 130-150 kilograms of wood an hour was required.<sup>109</sup> Transport costs may have risen over time as available trees became more distant from the glass-making site. The Venetians were always obliged to source fuel from the mainland, thus incurring transport costs for a heavy and bulky raw material.

---

<sup>107</sup> Verità, 'Technology and Deterioration of Vitreous Mosaic Tesserae', p. 4.

<sup>108</sup> Sandra Davison, *Conservation and Restoration of Glass*, 2<sup>nd</sup> ed. (Oxford: Butterworth Heinemann, 2003), p. 148. In Agricola's 1556 illustration of a glass-making furnace, drying wood is shown stored on beams above the furnace, greatly adding to fire hazards.

<sup>109</sup> Munaretto, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec.*, p. 60.

Glass-working tools are shown in the three illustrations of the furnace mentioned earlier and include bellows, moulds, shovels, pincers, cutters and blowpipes, all usually made from iron. The range of necessary tools is notable and for the glass-maker, if they were not supplied by the furnace owner, then they represented a cost. Tools may have been made near the glass furnace, as happened at Aiano-Torraccia di Chiusi, or acquired locally, but like the furnaces, fuel and raw materials, they do not appear to have changed over very many centuries, probably since Roman times.<sup>110</sup>

Plentiful water supplies were always needed to dampen down the furnace once fusing was complete, to cool instruments and to wash raw materials in an attempt to purify them. Various sources of water were used by glass-makers, including from rivers that did not dry up in summer such as the River Nestore at Piegara, the lagoon surrounding Murano, or specially constructed reservoirs, as found at Aiano-Torraccia di Chiusi.<sup>111</sup> Water was unique in being a free resource for the glass-maker, and relatively easily obtained.

### **Colouring glass**

Colouring glass was a challenging task in 1270, and it appears to have remained so. In part, this was a consequence of using natural, rather than man-made raw materials. Silica and alkali contained impurities such as iron, but their amounts could not be determined. Impurities gave glass a green colour and to eliminate it, the “right” amount of manganese, antimony or arsenic was needed as a decolourant, but the amount added to the glass could only have been estimated. Finally, different metallic oxides were added to colour the glass to the desired shades and these amounts also had to be estimated.<sup>112</sup> At the end of the thirteenth century, the Florentine apse mosaic at San Miniato al Monte contained a rather limited range of coloured tesserae, probably because of the difficulties of achieving certain colours, such as pure white, yellow and clear red. Essentially, it may have been challenging for glass-makers to

---

<sup>110</sup> Munaretto, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec*, p. 42, where he says, “*sono rimasti inalterati: ma la loro forma è simile a quella piu antica*”, (they remained unaltered: the shape was similar to tools that were much older).

<sup>111</sup> Cavalieri, 'Lombardic Glassworking in Tuscany', p. 1023.

<sup>112</sup> Borsook, *Medieval Mosaics*. The glossary in her book, pp. 187-211, provides details about colourants and many other technical matters.

replicate exactly any colour previously made by an unreliable chemical reaction, and more especially if ingredients had to be obtained from new and untested sources. This may explain the predominant use of gold tesserae in mosaics that were created around 1300. Approximately half of the apse mosaic at San Miniato al Monte is composed of gold tesserae. Their production relied upon a mechanical process.<sup>113</sup> Hand-beaten gold leaf was placed between two thin layers of glass and it was probably considerably easier to achieve large quantities of gold tesserae, rather other coloured ones.

By the late fifteenth century, Venetians had developed ways of obtaining a wider range of coloured glass tesserae than can be seen in mosaics that date to around 1300. For instance, in the ceiling mosaic in Agostino Chigi's funeral chapel in Santa Maria del Popolo in Rome that was created in the early-sixteenth century, the Venetian mosaicist used a large quantity of blue tesserae as a background colour, rather than the gold tesserae used at San Miniato al Monte and in the Roman churches at the end of the thirteenth century.<sup>114</sup> A treatise on glass-making that was attributed to Antonio da Pisa in the early fifteenth century specifies materials to add to molten glass to achieve what Paul Hills terms, "newly fashionable" and "more cheerful colours".<sup>115</sup> For example, the treatise records that when silver was added to yellow, a light yellow could be made. A range of yellow hues changing from the palest, clear tone to a deep and rich colour with brown hues can be seen in fifteenth-century tesserae in the museum at the basilica of San Marco which indicates that perhaps Antonio da Pisa's treatise was influential.<sup>116</sup> Clear and brighter reds, aquamarine and white tesserae became more commonly used in mosaics of the late-fifteenth century, the latter achieved by a

---

<sup>113</sup> Cesare Moretti and Tullio Toninato, *Glass Recipes of the Renaissance* (Watts Publishing, 2011), p. 37. See also Theophilus, *On Divers Arts. The Foremost Medieval Treatise on Painting, Glassmaking and Metalwork*. The earliest known description of the technique for the production of metallic tesserae is by Theophilus around 1122, though the technique was used by those making Early Christian Roman mosaics and probably known to the ancient Syrians.

<sup>114</sup> Paul Hills, *Venetian Colour*, (New Haven: Yale University Press, 1999), p. 150. Though there is an implied loss of colouring skills as blue tesserae had been used as a background colour in mosaics in Ravenna in the seventh century. It is likely that the blue tesserae used by the Venetian mosaicist in the Chigi chapel were made in Venice. There is no record of glass tesserae being made in Rome at this time.

<sup>115</sup> *Ibid.* p. 109.

<sup>116</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 213.

method that used enamelling.<sup>117</sup> The Venetians added lead to their glass recipes and this enabled them to produce a *lattimo*, or brilliant white opaque enamel. Various intensely coloured enamels could be made by adding other minerals to the *lattimo*. Manganese gave a violet colour, burnt copper yielded a deep blue enamel and iron oxide gave a green colouration.<sup>118</sup> Discussions about Pliny's *Natural History* which mentions "encaustics" may have encouraged interest in the process of enamelling which not only gave rise to a greater range of hues, but helped to give tesserae a greater surface brilliance.<sup>119</sup> In part, these newly developed colours that shone brightly reflected the esteem accorded to the combination especially of white and blue in the Renaissance, and which is so clearly seen in the highly glazed, fifteenth-century terracotta reliefs from the workshops of the della Robbia family, for instance, and slightly modified in the orchestration of white and grey decoration inside Florentine churches in the fifteenth century.<sup>120</sup> The small revival of mosaic art between 1450 and 1529 that was noted in Chapter 1 may thus possibly have been a response to the widening range of brighter, tesserae colours that became available to mosaicists during the late-fifteenth century.

### **The glass-makers**

Throughout the period 1270 to 1529, apart from colouring glass, the basic nature of the glass-makers' tasks did not change because the furnaces, tools and basic ingredients remained almost identical. And because of the challenging nature of making and colouring glass, glass-makers' skills and experience were vital to the industry. Consequently, these highly skilled glass-workers were valued in society. In Piegara in the early fourteenth century, men who coloured glass enjoyed pre-

---

<sup>117</sup> Hills, *Venetian Colour*, p. 126, where Hills mentions that Luigi Zecchin found the first mention of clear red in documentation that was dated 1493. See also p. 151, which gives examples of the popularity of white during the Renaissance. It was when *lattimo* glass was developed in Venice and white porcelain was imported from China.

<sup>118</sup> Moretti, *Glass Recipes of the Renaissance*, pp. 57-59.

<sup>119</sup> Verità, 'Technology and Deterioration of Vitreous Mosaic Tesserae', p. 8.

<sup>120</sup> The della Robbia terracotta tin-glazed reliefs are primarily blue and white though may sometimes incorporate small amounts of other colours. The decoration for example in the sacristy in San Lorenzo, Florence, may have been influenced by the views of Cicero and Plato cited by the contemporary architect Leon Battista Alberti, that temples should be "perfectly clean and white". See Hills, *Venetian Colour*, p. 151.

eminently respected positions in society.<sup>121</sup> Whilst in the fifteenth century Venetian patricians who married glassworkers' daughters did so without any loss of status.<sup>122</sup>

Acquiring and retaining highly skilled labour was important. In the late-fourteenth century, the Opera del Duomo in Orvieto seems to have been particularly successful at this, though it is not known how the Opera achieved it. At least four men worked in the cathedral yard making glass and creating mosaics for periods in excess of twenty years.<sup>123</sup> One man, Fra Giovanni Leonardelli, appears to have worked there for forty-five years. In the fifteenth century, Venice formulated specific policies to attract and retain labour and avidly pursued them. Glass-workers were required to take an oath that they would not practise their craft outside the city's jurisdiction and this was enforced by fines and prison sentences. However, there is evidence that these measures were flouted. Venetian glass-workers were recorded as working in many other Italian cities including Treviso, Padua, Verona, Ancona, Mantua, Ferrara, Ravenna and Bologna.<sup>124</sup> In another policy to attract glass-workers from outside of Venice, men were offered tax exemptions for five years in return for settling in the city.<sup>125</sup> And in yet another inventive measure to attract men with appropriate skills, Venetian glassworkers who had fled the city to escape from debt were encouraged to repatriate by State promises to help them settle their debts.

There is evidence from the mid-fifteenth century of high wages in the glass-making industry and they were probably intended to attract and retain skilled labour. In 1450 the Cappa glassworks on Murano paid forty-two ducats a year to the overseer, or maestro.<sup>126</sup> It is difficult to compare this rate of pay with that for another worker in a different occupation, in the same city, since workers were sometimes paid "in kind", with accommodation, meals and wine for example.<sup>127</sup> But, as a comparison and

---

<sup>121</sup> Munaretto, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec*, p.48.

<sup>122</sup> Ames-Lewis, *Concepts of Beauty in Renaissance Art*, p. 166.

<sup>123</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence'. The figures were computed from the dates on contracts cited by Harding, p. 84.

<sup>124</sup> Jacoby, 'Raw Materials for the Glass Industries of Venice and the Terraferma, about 1370 - about 1460', p. 85. In 1421, a furnace man testified that owners of glassworks on the mainland paid "considerably higher wages" than those paid in Venice.

<sup>125</sup> Ibid. p. 72.

<sup>126</sup> McCray, *Glassmaking in Renaissance Venice - The Fragile Craft*, p. 134.

<sup>127</sup> It is likely that rates of pay reflected local conditions and would vary from city to city.

according to Reinhold Mueller, a labourer's pay was about nineteen ducats per year, or less than half of the glass overseer's pay.<sup>128</sup> McCray confirms that glassworkers, and especially the maestri were paid, "significantly more" than counterparts in other Venetian industries."<sup>129</sup> The same would seem to have held true in Florence in the sixteenth century. The Medici glassworks paid its maestri one hundred soldi a day, whereas skilled building labourers were paid seventeen to nineteen soldi a day.<sup>130</sup> These wages paid to glass-workers probably reflect the difficulty of finding men with the skills to make glass, but their elevated pay-rates would have added to the cost of glass.

### **Making metallic tesserae**

Glass was made into a range of products, one of which was tesserae. For a single large apse mosaic, such as the late thirteenth century one in the Florentine church of San Miniato al Monte, thousands of small tesserae would have been needed. In Roman churches at the close of the thirteenth century, ten large mosaics were installed that would have required huge amounts of tesserae. In Venice, around 1500, millions of tesserae must have been needed to decorate parts of the basilica of San Marco including the Domes of the Choir, Saint Leonard and Ascension, the vault of the Apocalypse and the Sacristy, and parts of the Creation cupola. Together these mosaics cover an approximate area of 550 square metres.<sup>131</sup> So, how were these large quantities of small tesserae made?

The dominance of gold tesserae can be seen in many mosaics that were created especially in the early part of the period between 1270 and 1529. They include the apse mosaic of San Miniato al Monte but also its facade mosaic, and also the apse mosaic of the Pisan cathedral. As much as half the surface area of these mosaics was made up of gold tesserae and this may have been the case for several reasons. There was the association in contemporaries' minds between gold and the divine, but as

---

<sup>128</sup> Reinhold C. Mueller, *The Venetian Money Market, Banks, panics and the Public Debt, 1200-1500*, (Baltimore: Johns Hopkins University Press, 1997), p. 650.

<sup>129</sup> McCray, *Glassmaking in Renaissance Venice - The Fragile Craft*, p.134.

<sup>130</sup> Richard Goldthwaite, *The Building of Renaissance Florence* (Baltimore: The John Hopkins University Press, 1980), p. 438.

<sup>131</sup> This figure was obtained from my data-base and covers dates ranging from just before 1500 to 1530.

remarked earlier, producing large quantities of gold tesserae may have been more reliable than the production of large quantities of coloured tesserae. Marco Verità describes the whole process of making metallic tesserae as requiring, “sophisticated technical expertise”.<sup>132</sup> Clear molten glass was blown into a sphere by using a metal blowpipe. From this sphere, small pieces of glass were cut with a thickness of approximately one millimetre. Each one was called a *cartellina*. From 1400, the supporting *cartellina* was sometimes coloured red in order to enhance the golden colour.<sup>133</sup> Very thin sheets of beaten gold or silver were adhered to the *cartellina* using egg white and covered with another *cartellina*.<sup>134</sup> The three layers were then fused together in the furnace, and slowly cooled in an annealing chamber.<sup>135</sup> Afterwards, the metallic tesserae were trimmed to the desired size, using an iron cutting tool that was heated until red-hot and then applied to the glass so that a surface crack appeared. Repeated movement of the cutting tool along the crack caused the glass to break cleanly to produce the tesserae.<sup>136</sup> This process would have been repeated many thousands of times in order to make sufficient metallic tesserae for one mosaic and the process would have been very time-consuming. There is no evidence to suggest from the mosaics themselves that the method changed from the time when Theophilus wrote his manual in 1122, until Giovanni Dardinio’s description of the process in his manuscript of 1523.<sup>137</sup> Furthermore, if tesserae were made specifically for one mosaic, rather than stock-piled, then the method would have added very significantly to the time taken to produce a finished mosaic.

### **The process of setting tesserae**

An apse mosaic such as the one at San Miniato al Monte was installed onto a lofty, curved wall and required thousands of small tesserae to be securely attached and for

---

<sup>132</sup> Verità, 'Technology and Deterioration of Vitreous Mosaic Tesserae', p. 6. The first known description of making metallic tesserae is in Theophilus, *On Divers Arts. The Foremost Medieval Treatise on Painting, Glassmaking and Metalwork*.

<sup>133</sup> Paola Pogliani and Claudio Seccaroni (eds), *Il Mosaico Parietale* (Florence: Nardini Editore, 2010), p. 55.

<sup>134</sup> Borsook, *Medieval Mosaics*, p. 206, where Verità says that a cubic millimetre of gold was beaten until the foil could cover 6 square metres.

<sup>135</sup> Verità, 'Technology and Deterioration of Vitreous Mosaic Tesserae', p. 7.

<sup>136</sup> Theophilus, *On Divers Arts. The Foremost Medieval Treatise on Painting, Glassmaking and Metalwork*, p. 62.

<sup>137</sup> Pogliani and Seccaroni, “Il Mosaico Parietale”, p. 109.

the weight of the tesserae not to cause the collapse of the wall. The method of attaching the individual tessera to the wall seems to have been effective and not to have altered between the installation of this mosaic in the late thirteenth century, and the early sixteenth century. Plaster was made from marble dust, ground glass, straw, white of egg as a binder, and oil to keep the plaster moist and give the mosaicist more time in which to set the tesserae.<sup>138</sup> Two or three layers of plaster were applied daily to the surface of the wall to be worked upon and large nails were driven through the plaster into the wall to help support the combined weight of the tesserae.<sup>139</sup> The mosaicist then laid out a design for the mosaic in different colours on the top layer of plaster as a guide and there is evidence of this *sinopia* from the Baptistery of San Giovanni in Florence and San Marco in Venice.<sup>140</sup> The mosaicist's task was to tap each tessera into damp plaster so that it adhered firmly, remove any surplus plaster and clean the surface of the tesserae. Mosaicists would often use smaller tesserae for detailed parts of the mosaic, such as faces, and larger tesserae for the background. They would seem to have started setting tesserae at the top of the mosaic, if necessary from scaffolding, a view supported by Janet DeLaine in her study of ancient mosaics in the third-century Roman Baths of Caracalla.<sup>141</sup>

There were two main ways of setting the tesserae into the plaster base. Around 1300, there are examples of mosaicists setting the tesserae closely together, without leaving little spaces or interstices between them. This can be seen in the apse mosaic in the church of Santa Maria Maggiore, installed just before 1300. The book held in Christ's left hand bears letters that are sharp and clear from a distance because no interstices, or spaces, exist between the individual tesserae, leaving them to clearly delineate the letters on the page. At Santa Maria in Trastevere, a small mosaic in the Life of the Virgin series, again installed just before 1300, provides another example of closely-set tesserae. The *Nativity of Christ* contains images that could only have been depicted clearly by very closely embedded tesserae. It includes sharply defined streams of water

---

<sup>138</sup> Glossary, "Plaster" in *Medieval Mosaics*, ed by Eve Borsook et al., p. 200.

<sup>139</sup> These huge nails are exhibited in the museum of San Marco, Venice.

<sup>140</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 288. Sinopia is observable in the museum of San Marco.

<sup>141</sup> Janet DeLaine, *Design and Construction in Roman Imperial Architecture, The Baths of Caracalla in Rome* (University of Adelaide, Ph.D. thesis, 1993), p. 330.



poured from finely featured flagons, and exact and detailed geometric patterns on curtains that surround the Virgin's bed. The other way of setting tesserae was to leave spaces between the tesserae so that the plaster was visible. An example of this method can be observed in the Sancta Sanctorum mosaic above the altar where the three bowls depicted in the mosaic are not smoothly symmetrical, and haloes belonging to the saints are not completely circular. It is not clear if the use or disuse of interstices was related to the skill level of the mosaicist, or if the techniques were to achieve a desired effect.

Mosaics that were set later in the mid-fifteenth and sixteenth centuries do not have interstices. This puts into practice the advice of a fifteenth-century Venetian text, "*Sul modo di tagliare ed applicare il mosaico*" which mentions that tesserae should be laid close together and that any mortar left showing should be brushed with the appropriate colour to disguise it.<sup>142</sup> Examples of this practice include the image of Santa Helena in the church of Santa Croce in Rome, the Chigi chapel in Santa Maria del Popolo in Rome, and mosaics in the sacristy and parts of the domes of the Ascension, Saint Leonard and Choir of the Prophets in the basilica of San Marco in Venice. This gave the mosaics a very different appearance to those mosaics that contained interstices displaying the plaster-work.

Mosaicists also needed to decide whether to place the tesserae cut or uncut side up and parallel to the plaster or at an angle to it.<sup>143</sup> Mosaics installed around the year 1300 at San Miniato al Monte and in Rome tended to have their tesserae set at an angle to the surface of the plaster. The rough texture of the mosaics thereby enabled light from a myriad of candles in the churches to reflect off the surface of the tesserae in different directions and ways.<sup>144</sup> This was not to remain common practice. Later, in the second half of the fourteenth century, it became more usual for tesserae to be set

---

<sup>142</sup> Hills, *Venetian Colour*, pp. 10-13. The title can be translated as, "on methods of cutting and affixing mosaics (to walls)". This fifteenth century manuscript remained unpublished until 1858 when it was published by Giovanni Reali in Venice. I have been unable to consult this source.

<sup>143</sup> Eve Borsook, 'Rhetoric or Reality: Mosaics as Expressions of a Metaphysical Idea', *Mitteilungen des Kunsthistorischen Institutes in Florenz*, No. 44, 2000, p. 9. The colour of the tesserae was more intense on the cut surface.

<sup>144</sup> Care needs to be taken to observe original mosaic-work and not renovated work from later centuries which is usually very neat and regular.

flat and this technique gave the mosaics a very different, smooth appearance that became more valued. Accordingly, when this later standard was applied, Orcagna's work on the late fourteenth-century facade mosaics at Orvieto's cathedral was criticised by the Opera for not being flat enough.<sup>145</sup>

Around 1300, there is evidence that mosaicists reused tesserae or sections of mosaics taken from those installed in previous centuries. For example, the central image of Christ's bust in the apse mosaic at San Giovanni in Laterano in Rome was possibly transferred from a fifth-century mosaic, and parts of the apse mosaic of the Coronation of the Virgin at Santa Maria Maggiore, also in Rome, are also claimed to be from the original fifth-century apse mosaic.<sup>146</sup> The reasons for this reuse of sections of earlier mosaics are not clear, although the emblema of Christ at San Giovanni in Laterano is thought to have a connection with a miracle that occurred in the cathedral.<sup>147</sup> Apparently it appeared on the apse wall as a result of God's intervention. Elsewhere, there may have been more practical reasons for the reuse of tesserae, including their good condition, the usefulness of their colour, the shortage of "new" tesserae, or perhaps their cost.<sup>148</sup> Later, in the fifteenth and sixteenth centuries, it would seem that old tesserae or emblema were not reused, perhaps because Renaissance patrons had artistic preferences that were not congruent with the art of the Middle Ages.

### **The cost of mosaics**

There are no surviving contracts for mosaic work that give an indication of its cost in the late Middle Ages, though Catherine Harding has proposed that a mosaic would have been four times more expensive than fresco. Certainly, fresco had more limited requirements than mosaic work: plaster applied in several layers and carefully smoothed, ground pigments and paintbrushes.<sup>149</sup> In contrast, and as seen earlier in the

---

<sup>145</sup> Borsook, 'Rhetoric or Reality: Mosaics as Expressions of a Metaphysical Idea', p. 11.

<sup>146</sup> Oakeshott, *The Mosaics of Rome*, p. 314. See Julian Gardner in *The Roman Crucible* (2013), p. 238.

<sup>147</sup> Donal Cooper and Janet Robson, *The Making of Assisi* (New Haven: Yale University Press, 2013), p. 22.

<sup>148</sup> Verità, 'Technology and Deterioration of Vitreous Mosaic Tesserae', p. 8, which makes reference to the long-established practice of reusing tesserae.

<sup>149</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', p. 73.

chapter, mosaic art had a far more extensive number of requirements, commencing with a need for glass manufacture and the importation of many of its raw materials from places far away. The range of raw materials that were required, the capital equipment such as furnaces and tools that was needed, the smallness of the furnaces that limited how much glass could be made at any one time, the number and uncertainty involved in the processes inherent in making tesserae and the wastage of materials when processes failed, and the skilled labour required to carry them out would all seem to suggest that Harding's view on the costliness of mosaic art is very plausible.

Although the technology underlying the manufacture of glass tesserae suggests many reasons for the costliness of mosaic art, there are further reasons for inferring that mosaic art was costly, though they rely heavily on "negative" observations. For instance, although rural churches were decorated, often with fresco and later in the fifteenth century with tin-glazed terracotta reliefs to serve as altarpieces, there are no known instances of the walls and ceilings of rural churches being decorated with mosaic art.<sup>150</sup> The presumed lower cost of tin-glazed terracotta reliefs that made them affordable by rural churches would, in contrast to mosaic art, have rested upon a more limited range of raw materials, the use of moulds for mass-production, and a requirement for fewer and less skilled workers.<sup>151</sup> This suggests that mosaic art, with its technologically demanding processes was probably beyond the means of areas based on agrarian economies.

A further indication of the costliness of mosaic could be inferred from the actions of those who appear to have tried to limit the cost of repairing damaged mosaics. The Opera del Duomo at Orvieto cathedral is known to have purchased glazed terracotta tiles to replace glass tesserae during repairs in 1321, apparently for reasons of economy.<sup>152</sup> Furthermore, when tesserae from the lower part of the left hand apse mosaic became detached from the wall of Salerno's cathedral, the authorities repaired

---

<sup>150</sup> For example, the church in the small village of Radicofani in Tuscany has three large della Robbia tin-glazed reliefs, all serving as altar pieces. Many villages in Tuscany have at least one tin-glazed relief but no mosaics in rural areas were seen during my fieldwork or are referenced by other researchers.

<sup>151</sup> Information about tin-glazed reliefs was kindly provided by Dr. Steve Wharton, University of Sussex.

<sup>152</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', p. 79.

the loss with fresco.<sup>153</sup> Although this may have happened for a number of reasons, including an inability to obtain replacement tesserae or a lack of skilled mosaicists able to install new tesserae, the cost of new mosaic work may have been a factor. In Rome at the church of Santa Sabina, those responsible for the church fabric completely replaced a damaged mosaic with fresco in the sixteenth century, and again, it is possible that cost was a factor, although changed tastes may have been implicated.<sup>154</sup>

Yet another indication of the costliness of mosaic art between the late Middle Ages and Renaissance may be inferred from the status of those who commissioned the medium. They were all wealthy patrons, either because they were rich in their own right or had access to the wealth of others. The commissioner of the apse mosaic in San Miniato al Monte was the Calimala guild, whose symbol, a golden eagle, was positioned on the highest point of the church's facade.<sup>155</sup> The Calimala guild represented the tradesmen who were engaged with the finishing of foreign woollen goods and it was, reputedly, the wealthiest guild in Florence. In 1338 it had an annual business, solely in Florence, of 300,000 gold florins and the lucrative right to be the sole provider of red robes for all the cardinals of the Church.<sup>156</sup> This was a huge sum and exceeded the annual income of the papacy by 100,000 florins.<sup>157</sup>

Other wealthy patrons of mosaics were popes and cardinals with access to church finance. For example, Pope John XXII (1316-1334) commissioned the mosaic decoration of the facade of San Paolo fuori le Mura and arranged for 1,000 florins from church funds to be allocated to the project. In a papal bull of 1325, he decreed that all the offerings at the High Altar for the next five years should be allocated to the same project.<sup>158</sup> Other popes and cardinals who commissioned mosaic had family fortunes

---

<sup>153</sup> The lower half of the mosaic of Christ's baptism is now fresco. The fresco presumably replicates the mosaic images that were lost.

<sup>154</sup> Golda Balass, *Taddeo Zuccaro's Fresco in the Apse-Conch in S. Sabina, Rome* (Tel Aviv University, Ph.D. thesis, 1999), p. 106.

<sup>155</sup> Gene Brucker, *Renaissance Florence* (Los Angeles: University of California Press, 1983), p. 23, where the Calimala is described also as the "most aristocratic of guilds", equating with the city's old mercantile elite.

<sup>156</sup> Stanley Edgcumbe, *The Guilds of Florence*, (New York: Benjamin Blom, 1967), p. 127.

<sup>157</sup> Peter Spufford, *Handbook of Medieval Exchange* (London: Offices of the Royal Historical Society, 1986), p.228. The figure relates to papal income in the 1320s.

<sup>158</sup> Julian Gardner, 'Copies of Roman Mosaics in Edinburgh', *Burlington Magazine*, Vol. 115, No. 846 (1973), p. 587.

to draw upon. Pope Nicholas III (1277-1280) belonged to the wealthy Orsini family and so did Cardinal Giacomo Stefaneschi and his brother, Bertoldo, patrons respectively of the “Navicella” mosaic in San Pietro and the “Life of the Virgin” at Santa Maria in Trastevere. Pope Nicholas IV (1288-1292) was patron of several large mosaic projects in Rome at Santa Maria Maggiore and San Giovanni in Laterano. He was sponsored by the wealthy Colonna family and one member, Cardinal Giacomo Colonna, became joint patron of the apse mosaic at Santa Maria Maggiore.<sup>159</sup>

In Venice, the doges had an extended history of commissioning mosaic decoration for the basilica of San Marco, using the finances that emanated from its tripartite function as a private ducal church, parochial church and state church.<sup>160</sup> The action of Doge Andrea Dandolo (1342-1354) who commissioned extensive mosaics for the decoration of the basilica of San Marco, principally in the Baptistry and chapel of San Isidore, suggests that he had much wealth at his disposal.

Apart from the doges of Venice and members of the Florentine guilds, there appear to have been no secular patrons of mosaics during the late-thirteenth, fourteenth and fifteenth centuries, possibly because the medium may have been beyond the means of a single individual. It is only in the early sixteenth century that we find one individual layman patronising mosaic art. Agostino Chigi, reputedly the wealthiest man in Rome in the early sixteenth century, was able to commission mosaic art for his own funeral chapel in Santa Maria del Popolo and his possible reasons for doing so will be addressed in Chapter 5.<sup>161</sup>

## Conclusion

Although we are hampered by a lack of clear evidence that mosaic art was expensive, there are indications that this was the case. We know that only wealthy people or organisations commissioned mosaic art, which is suggestive of its costliness, but it also

---

<sup>159</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304*, p. 24, where he suggests that Giacomo Colonna part-funded the mosaic-work at Santa Maria Maggiore.

<sup>160</sup> Demus, *The Mosaics of San Marco in Venice*, Vol. 2 (text), p. 54.

<sup>161</sup> Elsa Gerlini, *La Villa Farnesina alla Lungara*, 3rd ed. in the series Guides to Italian Museums, Galleries and Monuments (Rome: Istituto Poligrafico e Zecca dello Stato, 2006), p. 3. See also Ingrid Rowland, 'Render unto Caesar the things which are Caesar's: Humanism and the Arts in the patronage of Agostino Chigi', *Renaissance Quarterly*, Vol. 39, No. 4, 1986, p. 676 for the wealth of Agostino Chigi.

seems that the technology underlying the art caused it to be expensive, fundamentally because it advanced very little between 1270 and 1529. Whilst it is true that there were a few aspects of mosaic production that changed between 1270 and 1529, they were minor and probably did not affect the costs involved in making mosaics. For example, glass-makers learnt how to produce a greater range of glass colours. Mosaicists set tesserae closer together in the plaster bed by 1500, with no plaster showing, and by this time tesserae were set flat and mosaics lost their lively and textured look. But, these changes probably had little effect on either the cost of mosaics or the time taken to produce them.

The basic methods of producing mosaics remained unchanged. Making glass continued to be an unreliable process. The small furnaces continued to be unpredictable until the invention of thermometers and valves well after the beginning of the sixteenth century made furnaces easier to control, and able to produce standard, flawless glass at every firing. And, because of the difficulties of controlling furnace heat, they remained small, unable to produce large quantities of glass more cheaply. The raw materials for glass-making also continued to cause difficulties, both because they could not be chemically analysed to reveal their impurities, and because so many were imported and thus more expensive than if acquired locally. The technology of making sufficient tesserae for a mosaic thus remained slow and technically challenging throughout the period. And, the process of fixing each individual tessera to church walls and ceilings did not alter or become quicker.

Chapter 6 will build on this discussion and look specifically at whether the cost of mosaics and the time taken to fulfil contracts for mosaics might help to explain the declining rate at which mosaics were commissioned in the fourteenth and fifteenth centuries.

## Chapter 3

### The Mosaicists

#### Introduction

There has been no collated information about the numbers of Italian mosaicists who worked between 1270 and 1529, and little discussion about how they conducted their work. The chapter presents the material I have gathered about the artists who worked as mosaicists in Italy during the period 1270 to 1529. A few, such as Giotto, Pietro Cavallini, Alesso Baldovinetti, Orcagna and Andrea Castagno are well known to scholars because they are also documented as painters, but little is known about many of the mosaicists because there is little or no surviving evidence of their work. This reflects the lack of research into mosaic art during the late Middle Ages and Renaissance.

I start by considering how many artists are known to have worked as mosaicists in Italy. Two types of mosaicists are discussed: those who were solely mosaicists and conducted all the processes involved in making a mosaic from glass-making to setting the tesserae, and those who were also painters and turned to mosaic work when opportunities presented, but who may not have performed all the processes. The chapter also considers the responses of mosaicists to changes in the demand for their art form that was revealed in the data presented in Chapter 1. Did these artists travel around Italy in order to find work, turn to repairing mosaics, or transfer to working with other media? The evidence will show that mosaicists' responses varied according to which city they lived and worked in, and the period during which they were active.

The occupation of mosaicist in Italy during the late thirteenth to early sixteenth centuries is an area that has received little scholarly attention to date. There are only two tangential studies. Claudia Bolgia reviewed archival evidence in order to argue that Franciscan friars worked as "professional" mosaicists and glass gilders in the

thirteenth and fourteenth centuries.<sup>162</sup> Catherine Harding also used archival evidence to establish the practices of fourteenth-century mosaicists working on the facade of Orvieto Cathedral in the mid-to-late fourteenth century.<sup>163</sup> In contrast, this chapter relies on a data-driven methodology using published primary documents and secondary sources in order to create a broader picture of the employment and role of mosaic workers over the whole of Italy, and for a longer period of time.<sup>164</sup>

### Definition of “mosaicist”

“Makers of mosaics” or “mosaicists” are defined in this study as men who worked on the wide variety of tasks needed for mosaic-making. These ranged from the making, colouring and cutting of glass for the tesserae, through to designing and installing mosaics on walls and ceilings.<sup>165</sup> This is a broader definition than commonly implied or used, and reflects the circumstances that prevailed in Orvieto during the fourteenth century.<sup>166</sup> In Orvieto, the same men are known to have made and cut glass for tesserae, and to have designed and installed mosaics.<sup>167</sup> This was a practice that may have been typical in Tuscany and elsewhere in the fourteenth century, thus explaining why the nineteenth-century scholar Gaetani Milanesi made a point of contrasting mosaicists, whom he said made their own tesserae and produced their own designs, with stained glass window makers who worked solely to artists’ cartoons.<sup>168</sup>

---

<sup>162</sup> Claudia Bolgia, 'Mosaics and Gilded Glass in Franciscan Hands: "Professional" Friars in Thirteenth and Fourteenth Century Italy', *Harlaxton Medieval Studies XX11E*, proceedings of the 2010 Harlaxton Symposium (2012), pp. 141-166.

<sup>163</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', pp. 73-102.

<sup>164</sup> It is likely that primary sources would reveal additional and more detailed information about the number of mosaicists and their working practices.

<sup>165</sup> Bolgia, 'Mosaics and Gilded Glass in Franciscan Hands: "Professional" Friars in Thirteenth and Fourteenth Century Italy'. This wider definition is also one used by Bolgia, p. 143. However, on p. 153 Bolgia concerns herself primarily with the extent to which Franciscan brothers could be described as “professional” when they received less pay than laymen, indeed why they were paid at all, given that brothers were forbidden to receive money under the Statute of Perpignan.

<sup>166</sup> Mosaicists are more conventionally described as the installers of tesserae onto walls and ceilings.

<sup>167</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 470.

<sup>168</sup> G. Milanesi, 'Dell'arte del vetro per musaico: tre trattatelli dei secoli XIV e XV ora per la prima volta pubblicati', *Romagnoli*, <https://ia801405.us.archive.org/24/items/dellartedelvetro00milauoft/dellartedelvetro00milauoft.pdf>. [Accessed 9 January 2016]. For example, in 1395 Agnolo Gaddi received four florins for designing one window for Florence cathedral. Sculptors also worked to other artists’ designs. For example, Agnolo Gaddi was paid six florins for designing sculptures for the Loggia dei Lanzi in Florence in 1383. See also Bruce Cole, *Agnolo Gaddi* (Oxford: Clarendon Press, 1977), pp. 62, 66. In the late fourteenth century, six



However, by the late fifteenth and early sixteenth centuries, the working practices used at Orvieto do not appear to have been replicated in Venice and Rome. In Venice, artisans on the island of Murano made glass and possibly tesserae, while painters such as Jacopo Bellini and Titian provided cartoons and designs for the mosaics to be installed in San Marco, whilst the mosaicists performed the final act of embedding the tesserae in mortar.<sup>169</sup> In Rome in the early sixteenth century, a similar practice was employed. The painter Raphael provided the cartoon design for the decoration of the Chigi chapel in Santa Maria del Popolo, the tesserae were probably made on Murano, but the tesserae were set by the Venetian mosaicist, Luigi di Pace.<sup>170</sup>

### **The meaning of “mosaic workshops”**

“Workshops” are principally found in Florence and Venice. It is a term used by scholars when the names of mosaicists are unknown, but they can use the term in different ways. Thus, “workshops” may describe a group of mosaicists who worked together using a similar style. Paolucci termed the mosaicists who created the *Christ in Judgement* mosaic in the vault of the Baptistery of San Giovanni in Florence as belonging to the “workshop of Tuscan artists”.<sup>171</sup> Other scholars use the term to indicate an unknown number of anonymous men who worked together on specific mosaic projects, at a certain point in time. Caravaggi uses the term, “The Workshop of the Baptistery” for a group of anonymous mosaicists who decorated the walls of the Baptistery in the Venetian basilica of San Marco.<sup>172</sup> In painting, the term can refer to members of a family who worked together but I have not found any evidence that the term has been used in this way in mosaic art.<sup>173</sup>

---

florins was over one hundred times more than a builder was paid for a *braccio* (or arm’s length) of brick wall. See Richard Goldthwaite, *The Building of Renaissance Florence* (Baltimore: The John Hopkins University Press, 1980).

<sup>169</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d’Oro*. See p. 200 which shows the “Great Cross” in the sacristy of San Marco which was designed by Titian and set by three mosaicists, Rizzo, Zio and Zuccato.

<sup>170</sup> Gordon Campbell (ed), *The Grove Encyclopaedia of Decorative Arts* (Oxford: Oxford University Press, 2006), p. 126. (No author found).

<sup>171</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), p. 484.

<sup>172</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d’Oro*, p. 192.

<sup>173</sup> Patricia Fortini Brown, *The Renaissance in Venice, A World Apart* (London: George Weidenfeld and Nicolson Ltd, 1997), pp. 52-58, where she writes about Venetian workshops of painters resting on the

The term “workshop” is more likely to be used by art historians to refer to mosaics that were created in the late-thirteenth or fourteenth centuries. However, almost nothing is known about such workshops. Conclusions tend to be drawn from the evidence offered by painters’ workshops, where far more is known. Anabel Thomas, for example, has analysed the records of fourteenth and fifteenth-century painters and discussed practical aspects of these workshops such as how painters often worked in cities from premises with a shutter that could open to give light, and provide a space in which to display their work for sale.<sup>174</sup> Often, these workshops were attached to the masters’ homes, which was also home to their apprentices. In comparison, mosaicists presumably worked largely on site. For example, it seems plausible that they were based outside Orvieto’s cathedral, because it is known from the archives that they did not work in bad weather.<sup>175</sup> It is not known where the mosaicists lived, or where their apprentices were quartered but we do know that sometimes, they were provided with food, wine and bedding.

It seems plausible that such workshops of mosaicists were set up in a manner similar to the workshops of other groups of artists such as painters, sculptors and ceramicists, where a “master” organised the work of others. In Orvieto, for example, Orcagna co-ordinated the activities of an unspecified number of workmen who were engaged on mosaic work at the cathedral.<sup>176</sup> However, it is known that the painter Botticelli employed at least six assistants and an unknown number of apprentices in his workshop.<sup>177</sup> Another Florentine painter, Neri di Bicci, employed over a period of twenty-two years, some twenty different assistants, some of whom stayed for a short period of time, others for many years.<sup>178</sup> Not all of these painting assistants would have become masters over time, and some may have changed masters rather than stay with the same master. It not so likely that this pattern was replicated in mosaic

---

long-standing tradition of members of a family working together. The same may have applied to mosaic workshops but as the mosaicists are anonymous, it is not possible to tell.

<sup>174</sup> Anabel Thomas, *The Painter’s Practice in Renaissance Tuscany* (Cambridge: Cambridge University Press, 1995), p. 31.

<sup>175</sup> Catherine Harding, ‘The Production of Medieval Mosaics: The Orvieto Evidence’, p. 87.

<sup>176</sup> *Ibid*, p. 75.

<sup>177</sup> Michelle O’Malley, *Painting under Pressure* (New Haven: Yale University Press, 2013), p. 165.

<sup>178</sup> Anabel Thomas, *The Painter’s Practice in Renaissance Tuscany* (Cambridge: Cambridge University Press, 1995), p. 67.

work because we know that some mosaicists stayed working at Orvieto and others at Venice for very long periods of time, probably because of the size of the commission and the relatively slow nature of the work.<sup>179</sup> However, organising apprentices and assistants to produce a fresco, altarpiece or piece of mosaic and making certain that all the necessary materials were to hand may well have taken considerable project-management skills, and it would seem likely that every artistic commission would have needed a “master”. Whilst these are usually known for painting commissions, they are not normally known for mosaic commissions.

At the Florentine church of San Miniato al Monte, the master may possibly have been Francesco da Pisa. His name is associated with the apse mosaic, but given its large size of approximately ten square metres, it is likely that he had a number of assistants and perhaps, some apprentices.<sup>180</sup> Like many painting masters, Francesco da Pisa may have set up this team of mosaicists when the patron commissioned the work.<sup>181</sup> He may, or may not, have subsequently transferred the same team of assistants he used at San Miniato al Monte to Pisa, when he gained the commission to decorate the cathedral’s apse with mosaic. But, like some sculptors, he may have used local labour, if available.<sup>182</sup> But, what happened to the mosaicists when work on the apse decoration was abandoned for some twenty years at Pisa? We have no evidence, but as there does not seem to have been more mosaic work available in Pisa, it would seem likely that the services of mosaicists were terminated by the master and they were left to find other artistic work, perhaps in another city.<sup>183</sup> In this respect, the pattern was

---

<sup>179</sup> Catherine Harding, *Façade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio* (University of London: Ph. D thesis, 1983), p. 260. Consilio worked for 38 years on the mosaics at Orvieto.

<sup>180</sup> Please see page 158 for a discussion of how long it may have taken mosaicists to complete a square metre of work. Estimates vary between 5.3 days and 14 days to complete a square metre of mosaic work.

<sup>181</sup> Michelle O'Malley, *The Business of Art, Contracts and the Commissioning Process in Renaissance Italy* (New Haven: Yale University Press, 2005), p. 83. Duccio, Signorelli, Filippino Lippi, Raphael and Savoldo are all known to have operated painting workshops. These painters came from a variety of Italian cities which suggests the establishment of painting “workshops” was a common practice across the peninsula from at least the late thirteenth century until the early sixteenth century.

<sup>182</sup> Thomas, *The Painter's Practice in Renaissance Tuscany*, p. 89. The example given is Donatello employing locals in Padua.

<sup>183</sup> O'Malley, *Painting under Pressure*, p. 160. She refers to master painters ceasing to employ assistants when they were no longer needed, a situation for the assistants that was “probably less than ideal”.

probably similar to painters and sculptors who have been shown to be similarly peripatetic.

### **Who became mosaicists?**

There is a long history of the involvement of monks in glass and mosaic-making. In the late-eleventh century, Benedictine monks are documented as making glass in several places, including at Monte Cassino, where they also installed many mosaics.<sup>184</sup> In the twelfth century, Benedictine monks introduced glass-making to Altare, in Liguria.<sup>185</sup> And from the late thirteenth century onwards, there are further examples of monks being involved with the making of glass and mosaics. Franciscan monks are known to have been involved in making glass and creating mosaics, and this is evidenced by the images of two Franciscan monks cutting and setting glass tesserae in the late thirteenth-century apse mosaic of the Roman cathedral, San Giovanni in Laterano.<sup>186</sup> Camaldolese monks from the Benedictine Order are known to have been engaged with glass-making in the area around Piegara in the fourteenth century, and possibly some of them worked at setting mosaics on the facade of the nearby Orvietan cathedral.<sup>187</sup> Fra Leonardello is recorded as having worked at the cathedral, both making glass and setting tesserae.

Not all glass-makers and mosaicists appear to have been members of religious orders. There is no evidence, for example, that Gaddo Gaddi who worked in mosaic at the Florentine Baptistery and cathedral was in holy orders. Indeed, he was the father of the painter, Taddeo Gaddi, and grandfather of Agnolo Gaddi, also a painter. Gaddo's connection with the medium of mosaic may have arisen from his birth in Florence in the 1250s when the project to decorate the Baptistery was underway, and offered work opportunities to those with artistic interests and skills.<sup>188</sup> The presence of ongoing mosaic projects in Orvieto between approximately 1320 and 1380, and Venice

---

<sup>184</sup> Marja Mendera, "Produzione Vitrea Medievale in Italia e Fabbricazione di Tessere Musive", in *Medieval Mosaics*, ed by Eve Borsook et al., p. 133, footnote 122.

<sup>185</sup> Munaretto, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec*, p. 48, footnote 29.

<sup>186</sup> Bolgia, 'Mosaics and Gilded Glass in Franciscan Hands: "Professional" Friars in Thirteenth and Fourteenth Century Italy', pp. 143-147.

<sup>187</sup> Munaretto, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec*, p. 48.

<sup>188</sup> Guglielmo Matthiae, *Mosaici Medioevali delle Chiese di Roma*, Vol. 1 (Roma: Istituto Poligrafico dello Stato, 1967), p. 77, where Matthiae ascribes his birth to between 1253 and 1259.

intermittently throughout the period 1270 and 1529, may similarly have encouraged the laity born in the cities to take up the opportunities for work presented by the projects.

From the mid-fifteenth century onwards, glass-making in Venice appears to have been carried out solely or primarily by laymen, since it is they who feature in disputes entered into the Venetian documents of the Podestà di Murano. These documents name laymen such as Giacomo da Mestre as a glass-maker in 1471, and also foreign mosaicists working in Venice. This is apparent from a document naming Giacomo da Mestre in dispute with a foreign glass-maker called Michiel Griego.<sup>189</sup> Ten years later, three more lay glass-makers are recorded because they disclosed secrets contrary to the best interests of *"la nostra Illustrissima Signoria"*.<sup>190</sup> It is interesting that the documents record the involvement of lay women in glass-making. There is a document dating to 1384 whereby Lucia Sbraia, who is described as a *"padrone di fornace a Murano"*, or owner of a glass furnace, ceding to her husband her ownership of it, but we do not know if she was employed in any capacity in the processes of glass-making.<sup>191</sup> In the late Middle Ages, it was not unknown for women to undertake work to supplement family incomes, and many spun, wove, and made leather goods so it may be that women were employed in glass manufacture in Italy.<sup>192</sup>

Families on Murano seem to have collaborated in workshops, perhaps with a tradition of apprenticing their offspring and this may explain how the Barovier family kept such a pre-eminent position for so long in the history of glass-making on the island and improved the quality of Venetian glass in the late fifteenth century by modifying the raw materials that were used.<sup>193</sup> The status of the men who set tesserae for the mosaic workshops at the basilica of San Marco from the late- thirteenth century until

---

<sup>189</sup> Verena Han and Luigi Zecchin, 'Presenze Balcaniche a Murano e Presenze Muranesi nei Balcani', *Balcanica*, Vol. 5, 1957, p. 87.

<sup>190</sup> Ibid. p. 87, "Our illustrious city".

<sup>191</sup> Ibid. p. 83.

<sup>192</sup> Veronica Sekules, *Medieval Art*, Oxford History of Art (Oxford: Oxford University Press, 2001), p. 46.

<sup>193</sup> Jacoby, 'Raw Materials for the Glass Industries of Venice and the Terraferma, about 1370 - about 1460', p. 86.

the mid- fourteenth century is not known, but thereafter, all the named mosaicists recorded as setting tesserae in the basilica appear to have been laymen.

### **Description of the database**

The database of mosaicists includes those who appear to have been members of the laity and those in holy orders. It details; their names (although these can be variously spelt); the dates and place of their birth and death, wherever possible; the dates when they were recorded as actively installing mosaics; the location of their recorded mosaic-work; whether the mosaic-work was a new piece or a repair; and any other types of artistic work undertaken by them. However, the data needs to be viewed cautiously. Inevitably, not all the names of all of the mosaicists who worked in Italy between 1270 and 1529 are known. There are also areas of potential confusion caused by the way in which mosaicists are referred to. For example, phrases such as “Giovanni Bonini di Assisi” may refer to the place where Bonini was born, started his artistic career, or carried out most of his work. The dates when mosaicists worked can also be insecure.

The database is presented as a series of 13 tables, (table numbers 23 to 35), as shown in Table 7 below. Each of tables 23 to 34 shows the names of individual mosaicists or workshops of mosaicists who worked in specific cities or regions between 1270 to 1329, 1330 to 1449, and 1450 to 1529. Their names are colour-coded in line with those in the database of mosaics. Mosaicists who worked between 1270 and 1329 are shown in green, those who worked between 1330 and 1449 are shown in yellow, and those who worked between 1450 and 1530 are shown in blue. The names of mosaicists for whom documentation is less secure can be found in Table 35. They have not been counted in the total number of mosaicists documented here.

**Table 7: Locations in the database of mosaicists and workshops active between 1270 and 1529**

Town/City/Region	Table number in Appendix 2	Page numbers in Appendix 2
Arezzo	23	203
Florence	24	204 -215
Lucca	25	216
Orvieto	26	217 – 222
Perugia	27	223
Pisa	28	224 – 232
Pistoia	29	233
Rome	30	234 – 237
Sicily	31	238
Siena	32	239 – 241
Southern Italy	33	242
Venice	34	242 -249
Other mosaicists	35	250

### **Methodology for the construction of the database of mosaicists and workshops of mosaicists**

Mosaicists tended not to sign their work, especially before the late fifteenth century, and there appear to be few surviving contracts or payment records for mosaic-work that may have given the names of at least the main mosaicist or master mosaicist.<sup>194</sup> The database, therefore, is drawn from a range of secondary sources. These sources include the fifteenth-century documents relating to the building and decoration of the Orvietan cathedral that were published in the nineteenth century by the Orvietan archivist, Luigi Fumi.<sup>195</sup> Other main sources include the corpus of work by Antonio Paolucci et al in 1994 on mosaics in the Florentine Baptistery and the work of Roberto Caravaggi et al in 1991 regarding surviving mosaics in the basilica of San Marco in Venice.<sup>196</sup> Names of mosaicists who worked in Rome have been gathered from a variety of sources as there appears to be no corpus of work similar to that of Fumi, Paolucci and Caravaggi for the mosaics of Rome.<sup>197</sup> However, there is uncertainty

<sup>194</sup> Though there is one known early exception to this. Ruscuti signed his name on the facade mosaic at Santa Maria Maggiore in Rome around 1305.

<sup>195</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*.

<sup>196</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The History, The Lighting* and Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*.

<sup>197</sup> An exception though is Matthiae, *Mosaici Medioevali delle Chiese di Roma*, Vol. 1, p. 77. It does not deal with mosaics of the Renaissance.

particularly about the names and numbers of mosaicists who worked in Rome. It is possible that late thirteenth-century mosaicists such as Cavallini and Torriti had assistants but there is no record to this effect, and there appears to be a scarcity of documentation, particularly relating to the repair of mosaics in Rome during the fifteenth century when popes turned their attention to renovating the city.<sup>198</sup>

In order to reveal trends in the activity levels of mosaicists, they need to be ascribed to specified decades. Often, secondary sources give only an estimate as to when mosaicists were active. For example, Otto Demus gives the date of Tommaso Oddo's mosaic-work at Monreale as between 1495 and 1503 so Oddo is therefore recorded as working between the decades 1490–1499 and 1500–1510.<sup>199</sup> In a small number of cases, however, the information is imprecise. The mosaic showing John the Baptist in the Florentine Baptistery of San Giovanni is recorded by Paolucci as dating to the “early-fourteenth century”. The phrase has been interpreted here as relating to the decade 1300–1309. Although this methodology may sometimes involve a small element of double-counting, it is outweighed by the ability of the material to identify general trends in the employment of mosaicists and workshops, something that it would not be possible to identify directly from the database.

### **Interpretation of the data**

The database lists one hundred and four securely-named and documented mosaicists and twenty workshops of mosaicists, who were active between 1270 and 1529, with a further list of seven less securely recorded mosaicists. This sample is large enough to identify trends. However, given the likely loss of mosaics and documentation, the lack of names for those who worked in mosaic workshops and our ignorance about mosaicists' assistants, the database of mosaicists' names is inevitably incomplete. The number of mosaicists given in this thesis is certainly an under-estimate of the total number of mosaicists who worked in Italy between 1270 and 1529.

---

<sup>198</sup> Susanne Spain, 'Restorations of Sta Maria Maggiore, Rome', in *The Art Bulletin*, Vol. 65, No. 2, 1983. For this view, see pp. 325–328.

<sup>199</sup> Demus, *The Mosaics of Norman Sicily*, p. 108.



### The demand for mosaicists in Italy

Some of the mosaicists recorded in the database are known because they were associated with well-documented mosaic projects, for example, Jacopo Torriti with the apse mosaic at Santa Maria Maggiore in Rome. Other mosaicists are known for reasons unconnected to the mosaics they created. For example, Pazzo and Bingo are known only because they are recorded as having stolen tesserae from the Florentine Baptistery and the Sicilian mosaicist Rinaldo, because the quality of his work was recorded as poor by the Opera del Duomo in Orvieto.<sup>200</sup> And, as referred to earlier, the names of many mosaicists who worked on mosaic projects are unknown, either because they were employed in workshops, or their names were unrecorded. The number of mosaicists does not therefore completely align with the number of mosaics.

Figure 5, which is derived from the database of known mosaicists and workshops shows general trends in the numbers recorded as active during the periods 1270 to 1329, 1330 to 1449, and 1450 to 1529. The data approximately corresponds to that presented in Chapter 1 for the numbers of mosaics that are known to have been installed between those same dates.

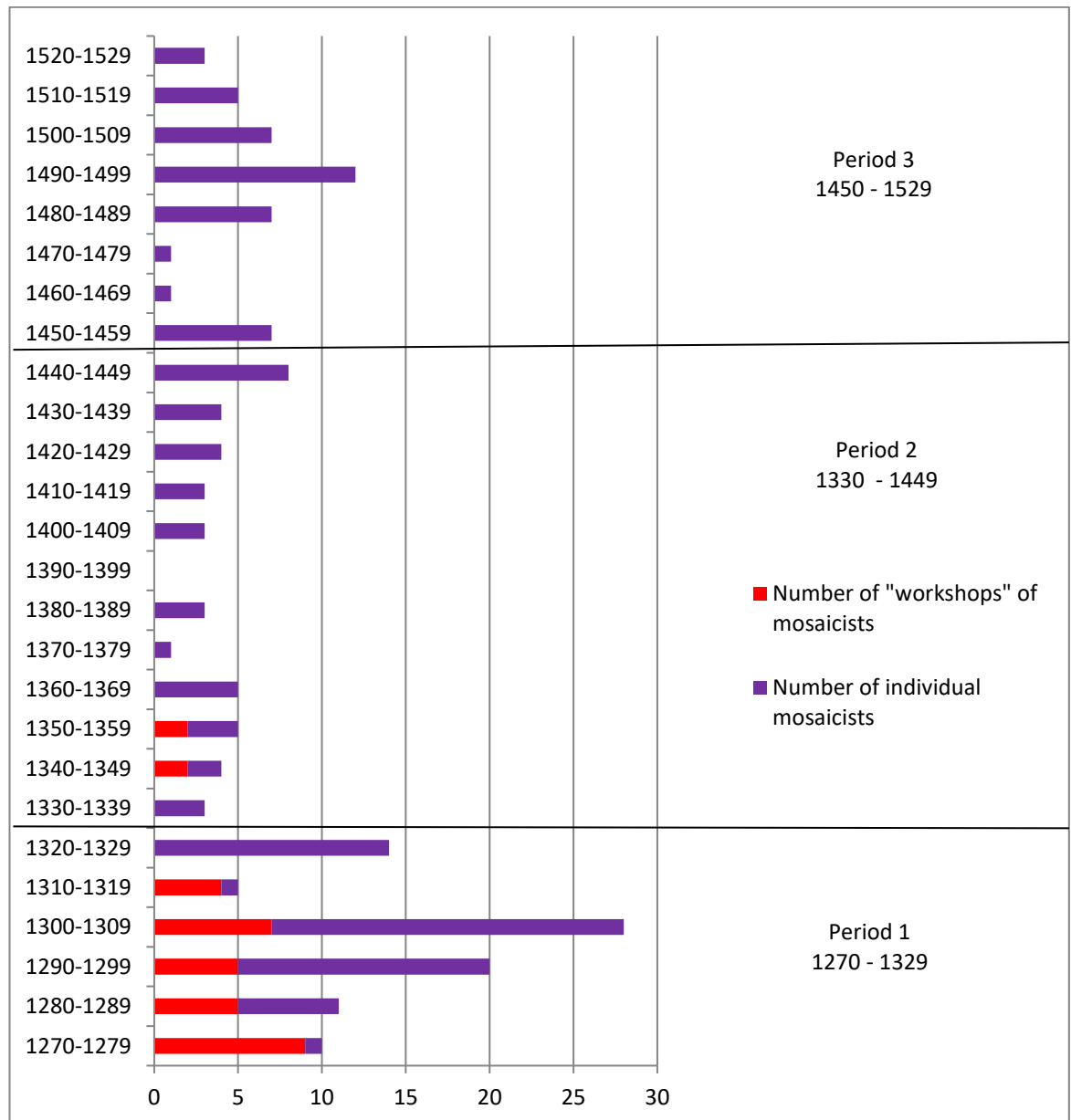
Figure 5 shows that during the first phase between 1270 and 1329, more mosaicists were employed in practising the art than in the subsequent two periods. The number of mosaicists peaked either side of 1300 and this corresponds with the data presented in Chapter 1 which showed that most of the mosaics were installed around the same time. In Florence, around 1300, the mosaic decoration of the Baptistery by various workshops was on-going, but drawing towards its completion in 1310. Nearby, in the church of San Miniato al Monte, Francesco da Pisa, and probably a team of assistants, worked on the facade and apse mosaics, and in Pisa, the vast apse mosaic of Christ was begun shortly after 1300 by Francesco da Pisa and continued by Cimabue. In Venice, workshops of mosaicists were engaged on the Moses cupola and the Zen chapel. The

---

<sup>200</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 283. See also Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 109.

reasons for this peak in mosaic activity at the close of the thirteenth century will be discussed in Chapter 5.

**Figure 5: Number of “workshops” of mosaicists and individual, named mosaicists recorded in the data-base as working in Italy in each of the decades from 1270 to 1529**



Between 1330 and 1449, there was a reduction in the number of mosaicists employed, and the disappearance during the period of “workshops”. In Florence, for example, no workshops seem to have operated, whereas between 1270 and 1329, seventeen workshops appear to have worked upon the mosaic decoration of the Baptistery. The

number of individual, named mosaicists in Florence fell from seventeen between 1270 and 1329, to six between 1330 and 1449. This profile of Florence reflects what tended to happen elsewhere in Italy, as well as the considerable fall in the number of mosaics that were created. Chapter 6 will discuss various reasons as to why this change might have happened.

Between 1450 and 1529, the number of mosaicists increased slightly, particularly just before and after 1500. This also reflects the data presented in Chapter 1 which suggests a small increase in the numbers of mosaics that were commissioned around 1500. The reasons for the slight upturn in the fortunes of mosaic art will form part of the discussion in Chapter 5.

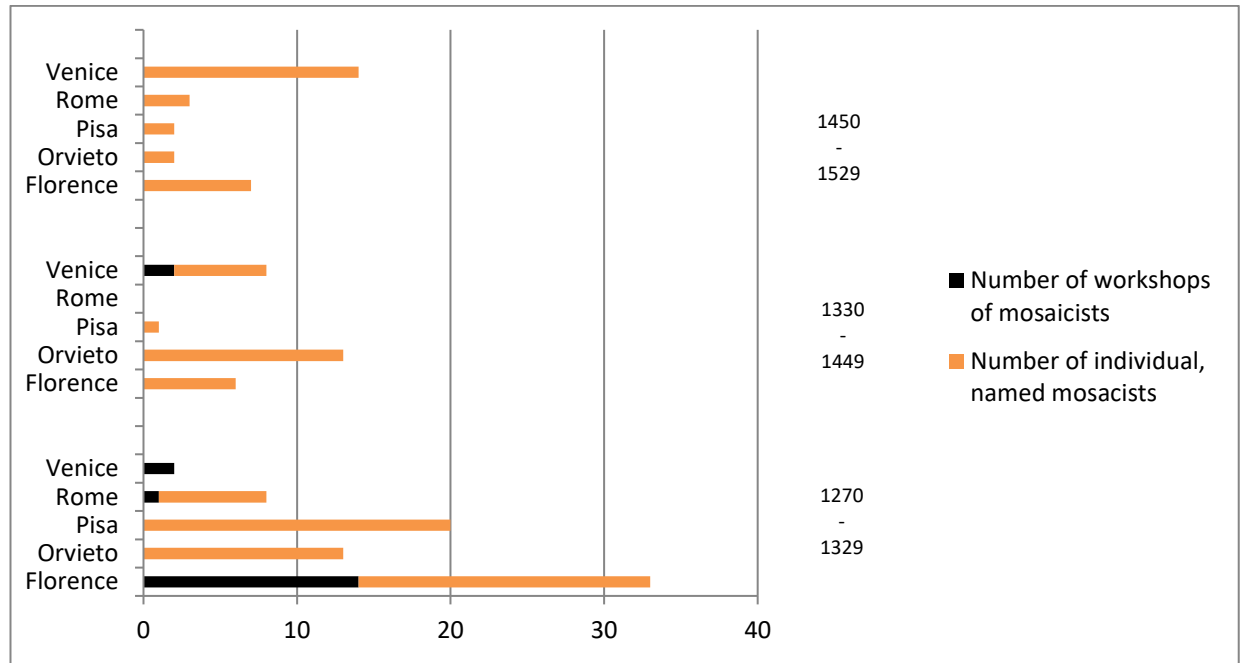
### **The demand for the services of mosaicists in five Italian cities**

Some aspects of art and architecture in the major cities of Italy were not similar. Venice is usually thought to have come later to the Renaissance than Florence for instance, so it is worth considering if mosaic art followed identical developmental histories in each of the cities of Florence, Orvieto, Pisa, Rome and Venice.

Data relating to the numbers of mosaicists who were active in these cities is presented. These cities were where most of the mosaic activity took place in Italy between 1270 and 1529.

Overall, Figure 6 shows marked differences in the numbers of mosaicists working in the five cities. However, during the period 1270 to 1329, when most of the one hundred and twelve mosaics identified in this study were created, all of the cities appear to have presented some opportunities for mosaic work within their boundaries. But there appear to have been more opportunities for mosaicists in Rome, Florence, Pisa and Venice than in Orvieto, although Figure 6 does not show this. This is because the decoration of the facade at Orvieto began at the end of the period, 1270 to 1329, in the 1320s. At the beginning of the fourteenth century, Orvieto was quiet with no mosaic work in progress.

**Figure 6: Numbers of “workshops” of mosaicists and individual, named mosaicists recorded as working in Florence, Orvieto, Pisa, Rome and Venice in the periods 1270-1329, 1330-1449 and 1450-1529**



Between 1330 and 1449, the opportunities for mosaicists to work appear to have declined significantly and this mirrors the sharp decline in the number of mosaics that were recorded in Chapter 1. In Rome, there was no ongoing mosaic work. Clerical patrons who had previously commissioned mosaics in Rome were residing in Avignon during most of this period and they did not commission mosaic, either in Rome or France. In Florence and Pisa, the amount of opportunities in mosaic work contracted. In Florence, the mosaic decoration of the Baptistery was complete by around 1310 and no further mosaic-work was commissioned in the city thereafter until the late fifteenth century. In Pisa, the cathedral's apse mosaic was finished during the 1320s and no more mosaics appear to have been commissioned in the city again until the mid-late fifteenth century. Only Orvieto and Venice presented more buoyant work opportunities. At Orvieto, the mosaic decoration of the cathedral's facade was ongoing between approximately 1320 and 1380. In Venice, the decoration of the chapel of the San Isidore was started in the mid-fourteenth century and the Mascoli chapel around

1430 by Michele Giambono. Both projects offered work opportunities to an unknown number of mosaicists.

Between 1450 and 1529, with the exception of Venice, there were far fewer opportunities for mosaicists to work on commissions than during the first period between 1270 and 1329. However, there was a slight upturn in the number of opportunities for mosaicists compared with the preceding period of 1330 to 1449. In the second half of the fifteenth century, Venice witnessed its greatest number of mosaicists at work and it was by far the most vibrant centre of mosaic production in Italy. By this period mosaicists are mostly named and include Antonio di Jacopo, Alvise Bastiani, Pietro de Zorzi, Crisogono Novello, Marco Rizzo, Vincenzo Bianchini and Francesco Zuccato. They principally decorated the domes of Saint Leonard, the Choir of the Prophets, and the Ascension, and the sacristy in San Marco's basilica. Concurrently, other cities saw only marginal amounts of mosaic decoration taking place. In Pisa, mosaic work solely consisted of repairs. In Rome, only Melozzo di Forlì, probably working with an unknown number of assistants, redecorated the chapel of Santa Helena in Santa Croce in Gerusalemme with mosaics in the late fifteenth century. The Venetian mosaicist Luigi di Pace is the only known mosaicist to have worked in the Chigi chapel in Santa Maria del Popolo in 1516. In Florence, Davide Ghirlandaio was seemingly alone in completing any mosaic work in the city, a small lunette mosaic at Santissima Annunziata in the early years of the sixteenth century.<sup>201</sup> From 1450 onwards, Orvieto provided opportunities only for repairs, as its cathedral's mosaic facade had been completed in the 1380s and inside the cathedral, the decorative medium of fresco was preferred.

The numbers of workshops shown in Figure 6 also shows how circumstances varied in the five cities. Documented workshops occurred mainly in two cities, Florence and Venice. Only in Venice did workshops continue into the second period between 1330 and 1449, though they do not appear to have survived into the later period, 1450 to 1529. In general, when little new mosaic work was commissioned, and the need was

---

<sup>201</sup> That is, apart from the piece of mosaic produced by Gherardo di Forlì as a competition piece for the contract to mosaic the chapel of San Zenobius in the Florentine cathedral. It is now in the Museo del Opera in Florence. It is possible that other competition pieces were produced but have been lost.

for repairs or the installation of just small lunette mosaics for example, it is possible that the occasional employment of one or two named mosaicists, or artists who were able to turn their hand to mosaic work, became a more pragmatic solution to these limited opportunities.

If Figure 5, which shows the numbers of named mosaicists and workshops working in Italy between 1270 and 1529 is compared with Figure 6, there are striking similarities between the national figures and those in the three cities of Florence, Pisa and Rome. Orvieto and Venice, however, do not replicate the general pattern and this mismatch suggests that there were very different job opportunities for artists to work as mosaicists in the five separate cities. This provides a piece of evidence that in terms of mosaic art, these major cities were different.

### **The work of mosaicists**

The definition given earlier in the chapter of “mosaicists” as men who performed a complete sequence of processes from glassmaking, to designing and setting tesserae on the walls and ceilings of buildings, was based on the work of mosaicists in Orvieto. Several of these men were associated with the mosaic decoration of the cathedral’s facade for long periods of time between approximately 1320 and 1380. What seems to separate these men from those who worked in Rome and Florence is not only the length of time that they spent working in one place on one project, but that they appear to have produced their own glass, made coloured and metallic tesserae, and set them onto the cathedral’s facade. In contemporary Orvietan documents, Leonardelli is described as *pictor et magister vitri et operis mosaichi*: painter, master of glass and mosaic work.<sup>202</sup> Consilio is recorded as having worked for thirty-eight years as a *magister vitri* or master glass-maker, and Nutarellus is recorded as making glass tesserae, including gold tesserae.<sup>203</sup>

In contrast, there is no reference to the mosaicists who worked at the Venetian basilica of San Marco making their own glass tesserae, at any point in time. Rather, it

---

<sup>202</sup> Bolgia, 'Mosaics and Gilded Glass in Franciscan Hands: "Professional" Friars in Thirteenth and Fourteenth Century Italy', p. 150.

<sup>203</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, pp. 260, 269.

appears that glass, and possibly tesserae were made by others, a short distance away on the island of Murano. In the late-thirteenth century, Cavallini does not appear to have any hand in the making of glass or tesserae whilst working on *The Life of the Virgin* in the Roman church of Santa Maria in Trastevere, and this is not unexpected. He was primarily a painter, probably without the high technical skill levels required for glass-making. As far as is known, Gaddi at the end of the thirteenth century did not make glass, or tesserae whilst working in the Florentine Baptistery and cathedral. But, contemporaneous accounts in the Calimala guild registers have been lost and there is little other Florentine documentation that can be consulted.<sup>204</sup> Marja Mendera has found no evidence that glass was made in Florence between the thirteenth and fifteenth century but has located the remains of medieval glass-works in the Val d'Elsa to the south-west of the city, though this may not necessarily have been the source of glass tesserae used by Gaddi.<sup>205</sup> It is just as possible that tesserae may have been purchased from Venice, since there was a history of a Venetian presence in Florence.<sup>206</sup> Alternatively, tesserae may have been bought from other cities, as they were in 1414 when the Calimala guild bought 1,884 pounds of tesserae from the workshop of Pisa cathedral.<sup>207</sup> The notion that tesserae were in short supply and costly at the end of the thirteenth century could possibly be inferred from archives that document their theft.<sup>208</sup>

Similarly, Alesso Baldovinetti, who worked a century and a half later than Gaddi in the same Florentine Baptistery, does not seem to have made glass tesserae and is

---

<sup>204</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 281, where Anna Maria Giusti provides an account of documentary research carried out that relates to the Baptistery of San Giovanni.

<sup>205</sup> Marja Mendera, "Produzione Vitrea Medievale in Italia e Fabbricazione di Tessere Musive", in *Medieval Mosaics*, ed by Eve Borsook et al., p. 126 which shows Mendera's map. Glass may have been produced for many other alternative purposes such as the production of drinking vessels and windows for the new churches that were being built.

<sup>206</sup> Otto Demus, *The Mosaic Decoration of San Marco, Venice* (Washington: Chicago University Press for Dumbarton Oaks, 1988), p. 201, where he quotes Vasari who says that "maestro Apollonio greco" moved to Florence, from where he had previously worked in Venice, to teach Tafi the skills of making plaster, mosaics and enamel. See also Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 268. When the mosaicists Pazzo and Bingo were dismissed for theft in 1301, the consuls of the Calimala guild were required to provide "good and honest masters from Venice or some other place".

<sup>207</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 287, quoting Vasari-Frey, 1911, p. 341. It is not known why Pisa had tesserae for sale. Perhaps they were left over from the cathedral's apse mosaic decoration over a century earlier, or were from a dismantled mosaic in an unknown Pisan church.

<sup>208</sup> Ibid. p. 468.

recorded as buying glass tesserae in 1487.<sup>209</sup> Baldovinetti's *ricordi* or journal, notes that he cut and adapted already purchased tesserae in order to make repairs in the cupola of the Baptistery. Although it is not known where he purchased the tesserae from, once again, Venice is the most likely source, since it is known that the Venetians were still making glass tesserae at that date for their own mosaic projects.

Thus, whilst the fourteenth-century mosaicists at Orvieto fulfilled a wide range of tasks from glass making to setting the tesserae on the cathedral's facade, this practice is not recorded in Rome, Florence and Venice at any point in time. Other mosaicists, perhaps because primarily they were painters who turned to mosaic art when such a commission became available, do not appear to have made their own glass or tesserae though they, or their assistants, may have cut them to suit their requirements.

### **The design of mosaics**

It would seem that many of the individual mosaicists who are known about were also painters, so it might seem likely that they undertook the preparatory work for their mosaic work in the same way as they did for their painting. That is, they may have also designed their own mosaics but there are no known surviving designs for mosaic work as there are for painting. For example, in Evelyn Welch's work, there is a reproduction of a design for a painted altarpiece drawn by a notary as part of a contract, presumably to ensure that the painter knew exactly what was required by the patron, though it was far more usual for painters to present their own designs for approval.<sup>210</sup>

Traces of dark pigments (sinopie) have been found on the walls of San Marco in Venice and the Florentine Baptistery of San Giovanni during the repair or restoration of earlier mosaic decorations.<sup>211</sup> These traces of pigment suggest one of two possibilities. Either they were remnants of lines drawn life-size onto the walls using as a reference a small design, or the pigments resulted from the use of cartoons. These were drawn life-size on paper or cloth from the small design so that instead of outlines being

---

<sup>209</sup> Ruth Wedgwood Kennedy, *Alesso Baldovinetti. A Critical and Historical Study* (New Haven: Yale University Press, 1938), p. 237.

<sup>210</sup> Evelyn Welch, *Art and Society in Italy, 1350-1500* (Oxford: Oxford University Press, 1997), p. 105.

<sup>211</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 213 for a photograph of sinopie. It can be seen in the upstairs museum of San Marco.



directly drawn onto the walls, pigments could be pounced through pin-pricked holes along the lines of the design that were drawn on paper or canvas. Alternatively, a sharp instrument could be used to score the lines on the cartoon, onto the wall.<sup>212</sup> No cartoons for mosaic work are known to have survived, probably because these cartoons were in contact with damp plaster and sometimes reused, so they became fragile. Only a few cartoons are known to have survived in the case of painting.<sup>213</sup> It is not clear when cartoons for mosaics first started to be used but Michele Giambono, Andrea del Castagno and probably Jacopo Bellini are said to have made cartoons for the mosaic decoration of the chapel of the Mascoli in the Venetian basilica of San Marco in the mid-fifteenth century.<sup>214</sup> Cartoons created by painters such as Titian, his brother Francesco Vecellio and others were in steady use in Venice by the late fifteenth and early sixteenth century and are thought to have replaced the freehand drawing of designs straight onto walls.<sup>215</sup>

There is also evidence that artists who were not mosaicists designed mosaics, drew the life-sized designs on walls or made cartoons to guide the finished piece of mosaic work. In the *ricordi*, or notebook, written by the Florentine painter Baldovinetti in the mid- fifteenth century, he records making cartoons for stained glass windows at Santa Trinita in Florence and in Lucca, and it is possible that he continued in the same way, and both designed and made cartoons for the lunette mosaics that he created for Pisa's cathedral.<sup>216</sup>

The painter Cavallini left no surviving *ricordi* and his involvement in the design of his six mosaic scenes from the *Life of the Virgin* in the apse of the Roman church of Santa Maria in Trastevere is unclear. According to William Tronzo, who was drawing on Giovanna Ragioneri's work in the early 1980s, the painter did not compose the original design.<sup>217</sup> Tronzo contends that Cardinal Jacopo Stefaneschi, brother of Bertoldo who

---

<sup>212</sup> O'Malley, *Painting under Pressure*, p. 130.

<sup>213</sup> O'Malley, *Painting under Pressure*, p. 132.

<sup>214</sup> Demus, *The Mosaics of San Marco in Venice*, Vol. 2 (text), p. 6.

<sup>215</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 227.

<sup>216</sup> Kennedy, *Alesso Baldovinetti. A Critical and Historical Study*, p. 236.

<sup>217</sup> William Tronzo, *Italian Church Decoration of the Middle Ages and Early Renaissance*, Vol. 1 (Bologna: Nuova Alfa Editoriale, 1989), pp. 167-192.

was the donor of the mosaic, had some hand in the design after seeing the *Life of the Virgin* mosaic series in the church of Santa Maria Maggiore. Even if this were the case, Cavallini may have adapted the design or made the cartoon to his own requirements, perhaps not exactly replicating the small design. Matters are not any clearer regarding Cavallini's possible second piece of mosaic work at San Paolo fuori le Mura in Rome. A large facade mosaic that is attributed by some scholars to Cavallini was badly damaged by fire in 1823, and only small parts were reset inside San Paolo.<sup>218</sup> Evidence for the original facade mosaic comes from a seventeenth-century drawing before its destruction and Piranesi's eighteenth-century engraving, but it is not known if Cavallini produced either a design or cartoon for the mosaic, though it would seem likely.<sup>219</sup>

At Orvieto, where there is evidence that artists undertook a wide range of tasks from glass-making to setting and repairing mosaics, Jacomini Nellus is recorded in the 1360s as drawing designs for mosaics, as well as colouring glass, making tesserae and setting them on the cathedral's facade.<sup>220</sup> Similarly, the Orvietan mosaicist, Nutarellus, is also recorded as undertaking a wide range of tasks, including designing mosaic work.<sup>221</sup>

Alessio Monciatti refers to traces of *sinopie* being found in the Florentine Baptistery during repair work to mosaics in the west side of the chancel.<sup>222</sup> Monciatti suggests that the mosaic images of prophets in this position were probably designed and drawn onto the walls using cartoons by Gaddi's master, Andrea Tafi, and that the two of them then set the tesserae together. According to Monciatti, the process of using a cartoon and pouncing a *sinopia* onto the walls was common practice amongst mosaicists in the late medieval period in Italy. In contrast, Caravaggi considers that the use of cartoons was not standard practice in Venice until the sixteenth century. It is possible that cartoons were used in some cities, such as Florence, rather earlier than in other cities.

---

<sup>218</sup> Paul Hetherington, *Medieval Rome* (London: The Rubicon Press, 1994), p. 111. Plate 20 reproduces an eighteenth-century engraving by Piranesi of the mosaic facade.

<sup>219</sup> Mark Zucker, 'Parri Spinelli Drawings Reconsidered', *Master Drawings Association*, Vol. 19, No. 4, 1981,

p. 431. The drawing is now in Edinburgh.

<sup>220</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, p. 275.

<sup>221</sup> Ibid. p. 267.

<sup>222</sup> Alessio Monciatti, 'Le Baptistere de Florence', *Revue de L'Art*, No. 120, 1988, p. 12.

Although the preparatory processes involved in making a mosaic do not appear to have changed fundamentally between the late-thirteenth century and the early-sixteenth century, workers began to specialise in just one task. In the early sixteenth century, some mosaicists such as Luigi di Pace who set the mosaics in the Chigi chapel in Santa Maria del Popolo in Rome did not design his own work. Rather, the patron employed Raphael to design the work. Sixteenth-century mosaics in the Venetian basilica of San Marco followed the same trend with painters such as Jacopo Bellini, Titian and Tintoretto designing mosaics and making cartoons, with mosaicists specialising on the tasks involved with setting the tesserae on the walls. In none of these cases do the cartoons seem to have survived.

### **Setting tesserae**

Tesserae could be set in various ways and Chapter 2 showed in detail how mosaicists changed their techniques between the Middle Ages and the Renaissance. Generally, although there were exceptions, mosaicists working at the end of the thirteenth century tended to set the tesserae in the plaster bed at angles, so as to reflect light at different angles and ways. They also tended to leave spaces between the tesserae so that the plaster was visible, thereby giving their mosaics a textured appearance. During the course of the late fourteenth century, mosaicists' methods gradually changed and tesserae began to be set flat, with little or no space showing between them. Importantly, this change in technique probably did not reduce the time taken to set a mosaic, and as Chapter 6 will discuss, the time taken to create mosaics may have affected the level of demand for the medium.

### **The training of mosaicists**

How mosaicists learnt their skills is unclear, but there would seem to be two different ways. The first was by way of apprenticeships. Mosaicists such as Gaddi, who worked on the Florentine Baptistery in the late-thirteenth century, were apprentices of the mosaicist, Tafi. Gaddi would have learnt a wide range of skills including: how to make the plaster and smooth it onto the walls and hammer in the supporting nails; whether to use stone or glass tesserae; how to choose the colours and to show shading; how to

cut the tesserae to requirements; and how to set the tesserae and clean away surplus plaster.<sup>223</sup>

Many other mosaicists also appear to have been apprenticed. Those who worked at Orvieto and Venice would probably have spent long periods watching, listening and copying others who had already learned the necessary complex skills. Antonio Averlino, (otherwise known as Filarete), wrote in the mid-fifteenth century that he could tell someone a thousand times how to make glass tesserae, but that no-one would understand perfectly until they had made tesserae with their own hands.<sup>224</sup> It would seem likely that an apprenticeship system in glass and mosaic making was widely used, though we have no detailed records of its use. Apprenticeships may have been similar to those operated in painting workshops. We know that master painters took young boys into their households when they left abacus school, aged around ten or eleven years of age. Cennino Cennini recommended a painting apprenticeship of thirteen years, during which the boys were expected to bind themselves “to respect authority and search for perfection”.<sup>225</sup> The length of apprenticeships in mosaics is not known, though it is likely that mosaic apprentices were taken to help with projects in situ. Filarete’s self portrait of 1445 in bronze on the doors into the church of San Pietro, Rome shows his seven named apprentices/assistants holding hands alongside their master. Eventually, apprentices may have become associates of the painting or sculpting master, before becoming masters in their own right. Given that artists transferred between the different art forms, there is little reason to think that master mosaicists working on short-lived mosaic projects would have operated in a fundamentally different way.

Painters such as Cavallini and Baldovinetti, who turned to mosaic art when such opportunities presented themselves, may have learned the necessary skills of setting tesserae from others who had already completed mosaics. It is possible, for example,

---

<sup>223</sup> Monciatti, 'Le Baptistere de Florence', p. 15.

<sup>224</sup> Pogliani, *Il Mosaico Parietale*, p. 99, where he reprints Antonio Averlino’s words, “... benché ti fusse ditto il modo e mille volte e sapessilo a punto, niente ti varrebbe se gli dessi opera, così tutte le altre cose che di mano si fanno è mestiero di dare loro opera, a voler sapere perfettamente quella tale cosa”.

<sup>225</sup> Francis Ames-Lewis, *The Intellectual Life of the Early Renaissance Artist* (New Haven: Yale University Press, 2000), p. 35

that Baldovinetti's collaboration with the Florentines, Paolo Uccello and Andrea del Castagno, may have given him the opportunity to learn the skill of mosaic work from one, or both of them.<sup>226</sup> Uccello and Castagno were both familiar with the skill of mosaic. Uccello repaired mosaics scenes of the Magi in the Baptistery of San Marco in Venice in the mid-fifteenth century and Castagno was probably the designer of the *Dormition of the Virgin* mosaic in the Mascoli chapel in the same building, around the same time.<sup>227</sup>

### **Repair work**

Although it is recorded that Uccello undertook repair work, the true extent of repair work that was carried out by mosaicists between 1270 and 1529 may well have been seriously under reported by church authorities because repairs addressed problems associated with earlier work or unwanted natural disasters, and were possibly seen as less prestigious than the creation of a new mosaic. We have no records of repairs made to mosaics as a result of earthquakes, in all likelihood because the walls bearing the mosaic work collapsed, destroying the art work. Reasons for repairs are more likely to include fires, structural deficiencies that resulted in damp and poor mosaic workmanship. Fires were not infrequent in buildings lit by candles, and the museum of San Marco contains examples of tesserae damaged by fire.<sup>228</sup> Damp was probably a widespread problem and as we have already seen, the apse mosaic in the cathedral of Salerno lost many tesserae for this reason. Poor workmanship was identified in a report of 1362 on Orcagna's mosaic of the Baptism of Christ on the facade of Orvieto's cathedral. It had been installed only two years previously, and the report identified three deficiencies in his work.<sup>229</sup> The colours of the tesserae and the mortar between them had faded, some the tesserae were insecurely set into the mortar and finally, the mortar was not flush with the uppermost surface of the tesserae. The report states

---

<sup>226</sup> Marita Horster, *Andrea del Castagno* (Oxford: Phaidon Press, 1980), pp. 12, 13. Castagno and Baldovinetti worked on the *Inferno* painting for Santissima Annunziata, Florence in 1454, and Uccello and Castagno worked together on stained glass in Venice. This collaboration may have induced an exchange of information and skills relating to mosaic work.

<sup>227</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 197, 215.

<sup>228</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 213.

<sup>229</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', p. 87. Orcagna probably completed the Baptism of Christ in 1360.

that the task of removing insecure mosaics was given to a glass-cutter employed on site, but the rest of the repair work was not recorded.

Once again, we find that the opportunities for repair work that were open to mosaicists varied according to the city in question, and the date. As we have just seen, repair work was available at Orvieto in the fourteenth century, but probably only to those already engaged with mosaic work. Later, in the second half of the fifteenth century, when the facade mosaics were a century old, the painter Davide Ghirlandaio was called from Florence to make repairs to the facade mosaics.<sup>230</sup>

Structural building problems at the Florentine Baptistery in the fifteenth century caused the roof to leak and spoil some of the mosaics. Baldovinetti, who like the Ghirlandaio brothers, trained as a painter, accepted from the Calimala guild the offer of an annual salary in return for keeping the mosaic decoration of the Baptistery in good repair.<sup>231</sup> This perhaps recognised the need to keep a constant and watchful eye on the condition of the Baptistery's mosaic decoration in the fifteenth century, but it is the only known example of this kind of arrangement.

In Venice, it was not painters or artists who primarily worked in other media that made repairs to mosaic, but the very mosaicists who were also creating new mosaics. For example, Antonio di Jacopo and Silvestro di Pietro both worked on the scene designed by Castagno of the Birth of the Virgin in the Mascoli chapel in the mid fifteenth century, but they also undertook repair work in San Marco, as necessary.<sup>232</sup>

In contrast, there is little evidence of artists in any media being given the opportunity to make repairs to mosaics in Rome in the fifteenth century, even though the city's buildings contained many mosaics. In 1420, when Pope Martin V (1417 - 1431) returned with the papal court to the city, the contemporary historian Platina said that he found, "houses had fallen into ruins, churches had collapsed, whole quarters

---

<sup>230</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 469.

<sup>231</sup> Kennedy, *Alesso Baldovinetti. A Critical and Historical Study*, p. 250.

<sup>232</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 97.

abandoned”.<sup>233</sup> Renovation of the city was focused on urban improvements to the streets, bridges, water supplies and restoring the physical structure of the churches and this took precedence over repairs to the decoration of churches. Susanne Spain remarks about the lack of attention to repairing Rome’s heritage of Christian mosaics.<sup>234</sup> When Pope Sixtus IV (1471 - 1484) turned to church decoration later in the fifteenth century, he is not known to have commissioned any mosaics.<sup>235</sup> Rather, he commissioned fresco, attracting artists to the city, amongst them, Sandro Botticelli, Pietro Perugino, Domenico Ghirlandaio and Raphael.<sup>236</sup> None of these painters are known to have repaired any mosaics in Rome in the second half of the fifteenth century and nor do there seem to have been any mosaicists living in Rome who were capable of repairing mosaics, or had any patrons who required them to do so. When Agostino Chigi wanted his memorial chapel in Santa Maria del Popolo partially decorated with mosaics in the early years of the sixteenth century, it was a Venetian mosaicist who was called to Rome.<sup>237</sup>

There are no records of repair work being carried to mosaics in many cities between 1270 and 1529. These include the cities of Sicily, as well as Naples, Amalfi, Salerno, Anagni, Lucca and Arezzo. A lack of work, either making new mosaics or repairing them may have induced mosaicists seek out other options. One option was to travel to find new commissions in other cities.

### **The movement of mosaicists around Italy**

In the twelfth century, there is a record of a mosaicist named only as “a master of the apse of San Marco” leaving Venice to travel to Ravenna to lead the execution of the apse mosaic in Basilica Ursiana.<sup>238</sup> Between the late Middle Ages and Renaissance, it was commonly the case that artists travelled around Italy to fulfil commissions. For

---

<sup>233</sup> Loren Partridge, *The Renaissance in Rome* (London: Calmann and King Ltd, 1996), p. 19, where Partridge quotes the fifteenth-century historian, Platina, author of the “Lives of the Popes”.

<sup>234</sup> Spain, 'Restorations of Sta Maria Maggiore, Rome', pp. 325-328.

<sup>235</sup> Generalised hypotheses for the lack of mosaic commissioning in the fifteenth and sixteenth centuries are proposed in Chapter 6 of this thesis.

<sup>236</sup> Richardson, *Locating Renaissance Art*, p. 46.

<sup>237</sup> Campbell, *The Grove Encyclopaedia of Decorative Arts*, p. 126.

<sup>238</sup> Otto Demus, *The Mosaics of San Marco in Venice*, Vol. 1 (text) (Chicago and London: University of Chicago Press, 1984), p. 281.

example, the Florentine painter, Fra Angelico, took a team of men to Rome and Orvieto between 1445 and 1449, and this included his fellow master, Benozzo Gozzoli, and a contingent of apprentices.<sup>239</sup> In the early fourteenth century, the sculptor and architect Andrea Pisano went from Pisa to Florence to work on bronze doors for the Florentine Baptistery. He then assumed the positions of cathedral architect at both Florence and Orvieto.<sup>240</sup> Given this tradition of artists travelling between cities to fulfil commissions from at least the twelfth century, it might be expected that mosaicists would also travel away from their home city in order to seek work between 1270 and 1529.

Figure 7 shows the numbers of mosaicists who are recorded in Database 2 as having worked in only one city, and those who appear to have worked in more than one city, in any media. We certainly do not have records for all the mosaicists who worked between 1270 and 1529, and the information upon which Figure 7 is based may be incomplete, but it gives an indication of the extent to which mosaicists moved around Italy in order to fulfil artistic commissions during that period.

Figure 7 shows three basic patterns. In Venice and Orvieto, mosaicists were more likely to remain working there, than to travel elsewhere for work. They may have been born in or near to these cities, and this may have restrained their movement to other cities. However, no such association can be made with any certainty as information about their birthplace is often uncertain or lacking. A more likely factor is the extended nature of mosaic projects in Venice and Orvieto, offering them continuous employment there. Mosaic work continued in the vast basilica of San Marco throughout much of the fourteenth and fifteenth century, and into the early sixteenth century, and mosaic work continued in Orvieto for approximately sixty years in the

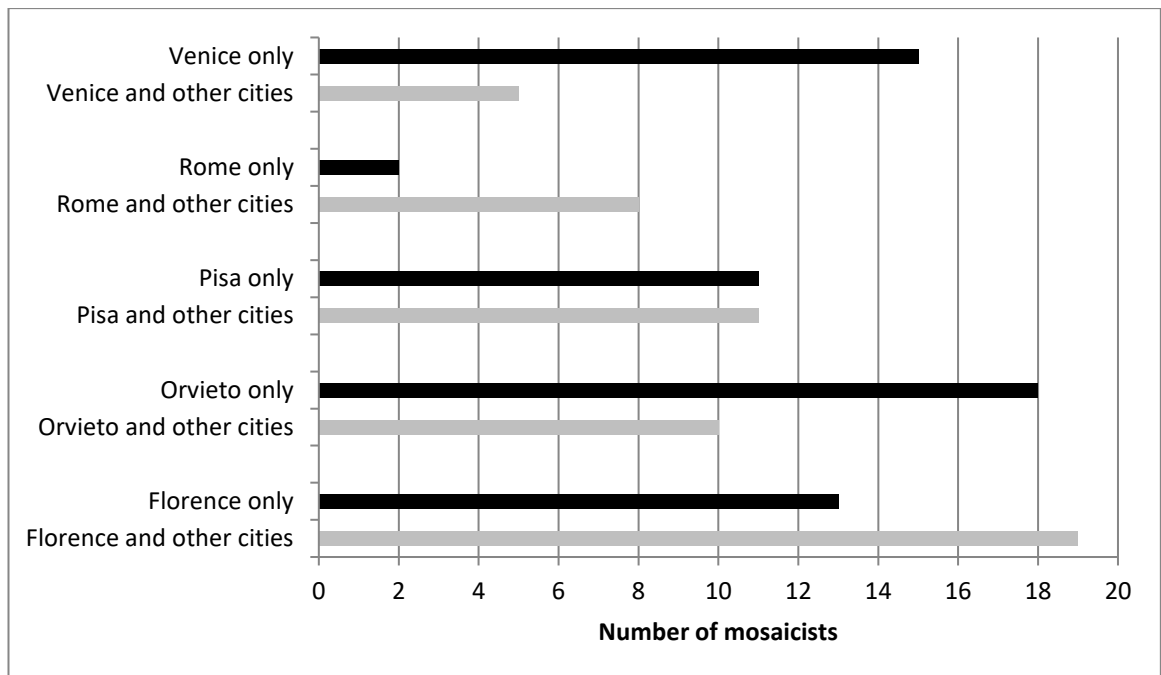
---

<sup>239</sup> Megan Holmes, *Fra Filippo Lippi* (New Haven: Yale University Press, 1999), p. 86.

<sup>240</sup> Rolf C. Wirtz, *Art and Architecture of Florence*, trans. by Susan Cox, Fiona Muller and Peter Barton (Cologne: Konemann, 1999), p. 534.



**Figure 7: Numbers of mosaicists recorded in the database who, between 1270 and 1529, worked only in one city, and those who travelled to work in other cities (in any media)**



fourteenth century. Thus, mosaicists working in Venice probably had little need to move to other cities to find work and the five mosaicists of the fifteenth century who appear to have worked in Venice as well as in other cities were exceptions. However, we do know that these five mosaicists appear to have been born outside of Venice. For example, Uccello was born in Prato at the end of the fourteenth century and worked not only in San Marco on a new programme of mosaic decoration in the basilica's Baptistry but also in Florence, in fresco.<sup>241</sup> Castagno provides a second example. He was born near Florence in 1421, and worked on the Mascoli chapel in San Marco, as well as stained glass and fresco in Florence.<sup>242</sup> But, in general terms, mosaicists who worked in Venice were not drawn to work in other cities.

In Orvieto, the extent of the mosaic work on the cathedral's facade throughout most of the fourteenth century made it less likely that mosaicists working there would need to travel elsewhere to find work. However, Figure 7 shows that ten artists who worked in Orvieto also worked outside of the city. The explanation given for Venice also applies in Orvieto. These ten mosaicists were presumably attracted by the

<sup>241</sup> Alessandro Parronchi, *Paolo Uccello* (Bologna: Massimiliano Boni, 1974), p. 2, 13.

<sup>242</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 6.

employment opportunities at Orvieto. For example, Giovanni Bonini, who probably came from Assisi, where he had worked on the stained glass at San Francesco, came to help mosaic the cathedral's facade in Orvieto in the middle of the fourteenth century.<sup>243</sup> He also travelled in order to work on mosaics in Perugia. A second example is provided by the Florentine, Orcagna, who worked on the mosaic decoration of the Orvietan cathedral's facade and the rose window at Orvieto in 1359, and also completed sculptural and fresco work in the Surozzes chapel in Florence.<sup>244</sup> Later, towards the close of the fifteenth century, Davide Ghirlandaio was another Florentine who worked in Orvieto. He repaired facade mosaics at Orvieto and worked in Florence, Rome and Siena in fresco.<sup>245</sup> But, by and large, mosaicists who worked in Orvieto, tended to stay working there.

In Florence and Pisa, the pattern was very different from that prevailing in Venice and Orvieto. In the two Tuscan cities, nearly as many mosaicists left their cities to work in other locations, as stayed within it. They had a distinct tendency to be more mobile than their fellow mosaicists in Orvieto and Venice and appear to have alternated between Florence and Pisa. Thus, Deodata di Orlandi, who worked on the mosaics in the Florentine Baptistery, left Florence around 1305, possibly because his part in the mosaic programme had ended, and found work in Pisa and Lucca.<sup>246</sup> Francesco da Pisa worked not only on the apse mosaic in the Pisan cathedral but also in Florence at San Miniato al Monte.<sup>247</sup> Cimabue was another Florentine who also worked in Pisa.<sup>248</sup>

Rome also shows a very different pattern, with far more men travelling out of the city where they had once found work, than staying within it. From the data available, it would appear that only two documented mosaicists who worked in Rome did not venture to work in other cities, whilst records show that eight mosaicists worked not

---

<sup>243</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 461.

<sup>244</sup> Ibid. p. 465.

<sup>245</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 166 and 369.

<sup>246</sup> Colum Hourihane (ed), *The Grove Encyclopaedia of Medieval Art and Architecture* (New York: Oxford University Press, 2012), p. 280. (No author found).

<sup>247</sup> Michael Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, Vol 1, (London: George Bell and Sons, 1886), p. 277.

<sup>248</sup> Gianfranco Malafarina (ed), *Il Duomo di Pisa* (Modena: Franco Cosimo Panini Editore, 2007), pp. 140, 141.

only in Rome but also in other cities. Cavallini provides a good example of this. After he completed a major Roman mosaic project at Santa Maria in Trastevere, and fresco commissions at the old San Pietro basilica and San Lorenzo, he left Rome and travelled to Naples where he painted frescoes on the walls of San Domenico Maggiore, Santa Maria Donna Regina and the cathedral.<sup>249</sup> Additionally, Cavallini possibly joined three other Roman artists, Giotto, Torriti, and Ruscuti at the basilica of San Francesco in Assisi.<sup>250</sup> The mass migration of artists out of Rome occurred around the time that the papal court left the city for France in 1304. Thereafter, for approximately one hundred and fifty years, there is no evidence of any mosaicists working in Rome.

In summary, it would appear that in some cities, notably Venice and Orvieto, projects allowed mosaicists to work continuously within their confines. In other cities, such as Rome, Pisa and Florence, where there appeared to be a sudden cessation of mosaic work early in the fourteenth century as large mosaic projects were completed and the papal court left Rome, mosaicists were far more likely to travel to other cities to find work, though often in other media.

### **Mosaicists and other media**

The data presented in Table 8 shows anonymous groups who worked on mosaic projects, as well as known individual mosaicists working between 1270 and 1329, 1330 and 1449, and 1450 and 1529. Table 8 also shows the names of men who are known to have worked on mosaics and any other form of media. Where a cell is left blank, it means that there is no evidence of any mosaicist also working in stained glass, paint or any other media, for example, metalwork or sculpture.

The extent to which men who engaged in mosaic work also worked in other media presents a complex scenario that once again varies according to which time period and which city is being considered. For example, Venetian artists who worked in mosaic were more likely to remain working in mosaic rather than transfer to any other

---

<sup>249</sup> Warr, *Art and Architecture in Naples, 1266-1713*, p. 42. These are attributions on stylistic grounds as documentation is lacking.

<sup>250</sup> Pasquale Magro, *Assisi, History, Art, Spirituality*, trans. by Peter Massengill (Assisi: Casa Editrice Franciscana, 1982). See also, Cooper, *The Making of Assisi*, p. 9.

medium. This holds true throughout the whole period 1270 to 1529. However, this Venetian pattern is not replicated in other cities.

The phase between 1270 and 1329 saw two different groups of anonymous mosaicists decorating the Zen Chapel and Moses cupola in the basilica of San Marco with mosaic. As the names of the men who worked in these groups are not known, it is not possible to know if they worked in any other media, but it seems unlikely given the extent of mosaic work that was ongoing in the basilica at the time. The programmes of mosaic decoration in the basilica continued throughout the late Middle Ages and Renaissance, and it probably provided sufficient work for those artists who possessed skills in mosaic work. Although we are lacking evidence that these mosaicists did not work in other media, there was, in all likelihood, little need for them to transfer into other media because of the ongoing nature of mosaic projects in Venice.

In Venice during the long phase 1330 to 1449, anonymous groups of mosaicists were still engaged in decorating the basilica of San Marco, principally in the chapel of San Isidore and the Baptistry.<sup>251</sup> Again, there is no evidence of them undertaking work in any other media, though they may have done so. Other artists arrived from other cities to also work in mosaic at the basilica. These men, who we know were born outside of Venice, are recorded as working in a variety of media. For example, the Florentine painter, Castagno, worked not only on the mosaic decoration of the Mascoli Chapel in San Marco, but also in fresco in San Zaccharia, Venice, in fresco in the Florentine church of Sant'Apollonia and on the stained glass in the dome of Florence cathedral.<sup>252</sup>

---

<sup>251</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 183-199.

<sup>252</sup> Frederick Hartt, 'The Earliest Works of Andrea del Castagno', *The Art Bulletin, College Art Association*, 1959, p. 231. See also Bernard Berenson, *Italian Pictures of the Renaissance*, Vol. 2 (England: Phaidon Press Ltd, 1957), p. 47.

**Table 8: Venice: Men who worked only in mosaic and those who also worked in other media in the three periods 1270 - 1329, 1330 - 1449 and 1450 - 1529.<sup>253</sup>**

	Only Mosaic	Mosaic and Stained Glass	Mosaic and Painting (fresco and on wood)	Mosaic and any other media
<b>1270-1329</b>	Anonymous group, active late 13 <sup>th</sup> C to early 14 <sup>th</sup> C			
	Second anonymous group working on the atrium			
	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>1330-1449</b>	Valerio Bianchini			
	Francesco Bianchini			
	Jacopo del Mosaico		Andrea del Castagno	
	Anonymous group working on the Baptistery	Andrea del Castagno	Michele Giambono	
	Anonymous group working on St. Isidore's Chapel	Paolo Uccello	Paolo Uccello	
<b>Numbers</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>0</b>
<b>1450-1529</b>	Only Mosaic	Mosaic and Stained Glass	Mosaic and Painting (fresco and on wood)	Mosaic and any other media
	Valerio Zuccato			
	Francesco Zuccato			
	Alberto Zio			
	Marco Rizzi			
	Vincenzo del Mosaico			
	Pietro			
	Grisogono Novello			Vincenzo Bastiani
	Pietro di Zorzi			Alvise Bastiani
	Matteo Tibaldi			Antonio di Firenze
	Pietro Silvestro		Antonio di Jacopo	Jacopo Bellini
	<b>10</b>	<b>0</b>	<b>1</b>	<b>4</b>

<sup>253</sup> All of the mosaicists listed in this, and the following tables, are referenced in the database in Appendix 2.

Between 1450 and 1529, most of the artists or artisans who worked on the Venetian basilica's mosaics appear to be Venetian. As in the earlier time periods, there is no record of them having worked with other media. They may have been kept fully occupied in the Mascoli and Zen chapels, the domes of Saint Leonard, Ascension and Prophets, the sacristy, and the cupolas of Creation and Joseph. Venice was unusual in having so much mosaic work in progress between 1450 and 1529 and the employment opportunities offered by the basilica meant that those with skills in mosaic had little or no need to turn to other media. The circumstances in Rome were very different as the figures for the city shown in Table 9 indicate.

**Table 9: Rome: Men who worked only in mosaic and those who also worked in other media in the three periods 1270 - 1329, 1330 - 1449 and 1450 - 1529**

	Only Mosaic	Mosaic and Stained Glass	Mosaic and Painting (fresco and on wood)	Mosaic and any other media
<b>1270-1329</b>			Filippo Ruscuti	
			Gaddo Gaddi	
			Andrea Tafi	
			Giotto	
	Jacopo da Camerino		Pietro Cavallini	
	Workshop "School of Cavallini"		Jacopo Torriti	
<b>Numbers</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>0</b>
<b>1330-1449</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Numbers</b>				
<b>1450-1529</b>			Baldassare Peruzzi	
	Luigi di Pace		Melozzo da Forli	
<b>Numbers</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>

In Rome, the period between 1270 and approximately 1305 appears to have offered many opportunities for work in mosaic. It is known that these were available at the major churches of Santa Maria Maggiore, Santa Maria in Trastevere, San Giovanni in Laterano, Santa Maria in Aracoeli and San Pietro, where large mosaics were installed. As this was a resurgence of mosaic work in the city, rather than a continuation of the

art, and there were no recorded anonymous groups of mosaicists as there were in Venice, this renewed interest in Rome created opportunities for painters to transfer to working with mosaic. Painters such as Cavallini and Giotto undertook mosaic commissions. Thus, Cavallini completed the mosaic scenes from the *Life of the Virgin* in the church of Santa Maria in Trastevere but also decorated the church of Santa Cecilia with a large fresco, as well as seven other Roman churches. He completed frescoes in Naples and possibly, also Assisi.<sup>254</sup> Giotto, who is thought only to have completed one mosaic, the *Navicella* mosaic in the old San Pietro basilica, painted many frescoes in a variety of cities including in Padua, Florence, Naples and Assisi.<sup>255</sup> After the papal court with its considerable power of patronage left Rome for France in 1304, circumstances changed dramatically.

Table 9 highlights the devastating effect that the papal court's absence in Avignon and its poor relationship with the city of Rome had upon the Roman artistic scene.<sup>256</sup>

There was no mosaic work in the city between 1330 and 1449. Between 1450 and 1529 there was only a slight change from the immediately preceding period. Only two mosaics were installed in Rome. One was in the chapel of Santa Helena in the church of Santa Croce in Gerusalemme, where earlier mosaic decoration was replaced by Baldassare Peruzzi and Melozzo da Forli, and the other was in the Chigi chapel in Santa Maria del Popolo.<sup>257</sup> Although both were sizable projects, no other opportunities for mosaic work appear to have been available and therefore, the figure for men who worked in mosaic and any other medium is very low. It does not compare with the vibrant scenario in Rome around the close of the thirteenth century.

Table 10 shows the names of men who worked in Florence on mosaics, and also in other media.

---

<sup>254</sup> John White, *Art and Architecture in Italy: 1250-1400*, 3rd ed. (New Haven: Yale University Press, 1966), pp. 199-224.

<sup>255</sup> White, *Art and Architecture in Italy: 1250-1400*, pp. 309-343.

<sup>256</sup> Julian Gardner, 'San Paolo fuori le Mura, Nicholas III and Pietro Cavallini', *Zeitschrift für Kunstgeschichte*, Vol. 34, No. 3, 1971, p. 248 where Gardner writes about "a very considerable decline in the sheer volume of painting in the city".

<sup>257</sup> Reasons for the Chigi Chapel's decoration with mosaics will be discussed in Chapter 5.

**Table 10: Florence: Men who worked only in mosaic and those who also worked in other media in the three periods 1270 - 1329, 1330 - 1449 and 1450 - 1529**

	Only Mosaic	Mosaic and Stained Glass	Mosaic and Painting (fresco and on wood)	Mosaic and any other media
<b>1270-1329</b>	Pazzo			
	Bingo			
	Cagnasso			
	Lippo di Benivieni			
	Vanni di Firenze			
	Turetto			
	Pogavansa			
	Parduccio			
	Garoccio			
	Barile			
	Francesco da Pisa			
	Artist close to Cimabue			
	Forerunner of Cimabue			
	Workshop "Florentine artists of early 14 <sup>th</sup> C"			
	Workshop "Master of St. Cecilia (and Workshop)"			
	Workshop "Milieu of the Master of San Gaggio"			
	Workshop "Milieu of the Master of San Gaggio and Master of St. Cecilia"			
	Workshop "Artist working in the Sienese style"			
	Workshop "Master of Assisi"			
	Workshop "Milieu of Master of the Magdalen"			
	Workshop "Tuscan Artists"			
	Workshop "Milieu of Coppo di Marcovaldo"		Gaddo Gaddi	
	Workshop "Artist from a Pisan Milieu"		Andrea Tafi	
	Workshop "Artist close to Coppo di Marcovaldo and early 14 <sup>th</sup> C Venetian masters"		Jacopo di Meliori	
	Workshop "Florentine Pisan Artist"		Deodata di Orlandi	
	Workshop "Milieu of Meliori and of Coppo di Marcovaldo"		Apollonius	Gaddo Gaddi
	Workshop "Milieu of Meliori"		Coppo di Marcovaldo	Coppo di Marcovaldo
<b>Numbers</b>	<b>27</b>	<b>0</b>	<b>6</b>	<b>2</b>



**Table 10 continued: Florence: Men who worked only in mosaic and those who also worked in other media in the three periods 1270 - 1329, 1330 - 1449 and 1450 - 1529**

	Only Mosaic	Mosaic and Stained Glass	Mosaic and Painting (fresco and on wood)	Mosaic and any other media
<b>1330-1449</b>			Paolo Uccello	
	Gambassi		Florentino Lippo	
	Giovanni Bartolommei		Agnolo Gaddi	Donato di Donato
	<b>Numbers</b>	<b>2</b>	<b>0</b>	<b>3</b>
<b>1450-1529</b>			Monte di Giovanni del Fora	
			Ridolfo Ghirlandaio	
			Giovanni di Gherardo	
			Sandro Botticelli	
			Davide Ghirlandaio	
		Domenico Ghirlandaio	Domenico Ghirlandaio	Alesso Baldovinetti
		Alesso Baldovinetti	Alesso Baldovinetti	Domenico Ghirlandaio
<b>Numbers</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>2</b>

Table 10 shows that between 1270 and 1329, there is evidence for more artists in Florence working only in mosaics, rather than engaging with a wide range of media. Thirteen men and fourteen groups of anonymous mosaicists were employed solely in making mosaics in the phase 1270 to 1329. In comparison, there is evidence that only six men who undertook mosaic work also painted, and just two men undertook work in a wider range of media. Coppo di Marcovaldo was unusual in that he installed the mosaic scenes of the *Last Judgement and Hell* in the Baptistery but also painted an altarpiece for Santa Maria del Bordone in Siena and wooden crucifixes at San Gimignano and Pistoia with his son.<sup>258</sup> The vast majority of mosaicists working in

<sup>258</sup> Miklos Boskovits, *Coppo di Marcovaldo (Coppus Alarcoaldi)*, Istituto della Enciclopedia Italiana, <http://www.treccani.it/enciclopedia/coppo-di-marcovaldo> [Accessed 9 January 2016].

Florence at this time were engaged upon the completion of the mosaic programme in the Baptistery and probably had little need to seek out commissions in other media, and in other places.

This scenario changed in the next phase, between 1329 and 1449. By this time, the mosaic decoration of the Baptistery was complete. There was very little mosaic work in progress in Florence during this long period of time and consequently, a dramatic reduction in the number of recorded mosaicists working there. The number of recorded mosaicists who appeared to devote themselves solely to mosaic fell to two, both of whom are relatively unknown, whilst those who also worked in “other media” fell to four. Agnolo Gaddi is thought to have undertaken just a small amount of repair work in the Baptistery where his grandfather had worked on installing the mosaics in the past. But Agnolo seems to have spent most of his career producing fresco decoration, the most important of which is his *Legend of the Cross* in the choir of Santa Croce in Florence.<sup>259</sup> Uccello does not seem to have undertaken mosaic work in Florence. Rather, he was attracted to Venice by the opportunities for mosaic work in the basilica, but he spent rather more of his career painting.<sup>260</sup>

Between 1450 and 1529, there is evidence that seven artists who sometimes worked in mosaic also fulfilled commissions in other media, especially fresco. Domenico Ghirlandaio provides a good example of a painter who undertook a limited amount of mosaic work, perhaps introduced to the medium by Lorenzo de’ Medici who planned to have the Chapel of San Zenobius decorated with mosaic. With his brother, Davide, Domenico made a small lunette mosaic over the cathedral’s Porta della Mandorla but most of his career was spent producing fresco decoration. In Florence, Domenico’s fresco work can be found principally in Santa Maria Novella, where he decorated the Cappella Tornabuoni with scenes of the *Life of the Virgin and Saint John the Baptist*, but he was also active in Rome on the Sistine Chapel.<sup>261</sup> Baldovinetti is an example of

---

<sup>259</sup> White, *Art and Architecture in Italy: 1250-1400*, p. 566.

<sup>260</sup> Ian Chilvers (ed), *Oxford Dictionary of Art and Artists* (Oxford: Oxford University Press, 2009), p. 641. See also Kim W. Woods (ed), *Making Renaissance Art*, Vol. 1 in the series *Renaissance Art Reconsidered* (New Haven and London: Yale University Press 2007), pp. 75, 76, which talks about Uccello’s fascination with perspective.

<sup>261</sup> Wirtz, *Art and Architecture of Florence*, p. 216.

a mid- to- late fifteenth century Florentine artist who, rather than working in fresco and completing the occasional piece of mosaic like the Ghirlandaio brothers, created and repaired a diverse range of artistic works for patrons. These include two small lunette mosaics for the Florentine Baptistery, a small mosaic lunette for above the main doors of Pisa cathedral and repairs to mosaics at the church of San Miniato al Monte, but also stained glass for Santa Croce, intarsia work for Florence cathedral and designs for a Luca della Robbia terracotta frame around a tomb.<sup>262</sup>

The preceding section illustrates the diverse circumstances in which mosaicists worked in three different Italian cities, at different times between 1270 and 1529. In Rome, when clerical demand for mosaics was buoyant around 1300, artists who were previously painters accepted mosaic commissions. For instance, Cavallini had painted Old and New Testament fresco cycles in San Paolo fuori le Mura between 1275 and 1289, and in the early 1290s, a fresco for Santa Cecilia.<sup>263</sup> Around 1300, he fulfilled a mosaic commission at the Roman church of Santa Maria in Trastevere. After the papal court left Rome for France in 1304, and ceased commissioning mosaic art, Cavallini returned to painting, including at the court in Naples. Ruscuti fulfilled a mosaic commission to decorate the facade of Santa Maria Maggiore around 1300, and subsequently moved to France to paint after 1304.

In Florence, Gaddi started his career as a mosaicist in the thirteenth century, and was able to spend much of his career producing mosaics because of the commitment made by the Calimala guild to the completion of the mosaic decoration inside the Baptistery. In Orvieto, the decision to decorate the cathedral's facade between the 1320s and 1380s with mosaic ensured long term employment probably for mostly local men, who completed a much wider range of processes than in other Italian cities, probably because of the architect, Maitani's decision to establish glass furnaces in the cathedral yard. These mosaicists were the only ones who made their own glass tesserae. In Venice, it appears that there was a centuries-long commitment to decorate San Marco

---

<sup>262</sup> Emilio Lodi, *Alessandro Baldovinetti, Pittore Fiorentino con l'aggiunta dei suoi Ricordi* (Florence: Alfani e Venturi, 1907), p. 84, where Lodi mentions Baldovinetti's prodigious range of work and the low value accorded to his work.

<sup>263</sup> Paul Hetherington, *Pietro Cavallini: A Study in the Art of late Medieval Rome* (Isleworth: Sagittarius Press, 1979), p. 129.

and any new extensions, largely with just the medium of mosaic. And so, once again, it was probably mostly local men who worked as mosaicists over long periods of time in the basilica, though by the late-fifteenth century, painters were being used to design the mosaic decoration.

These different scenarios in Rome, Florence, Orvieto and Venice suggest that each city's individual circumstances were highly influential in determining how mosaicists practised their jobs. In part, mosaic practice seems to have depended on what political circumstances prevailed in the cities. For instance, Orvieto appears to have had political control over the outlying villages that formed part of its defensive system.<sup>264</sup> The presence of a glass making industry in the villages of Piegara and Monteleone may have been one factor in the decision to decorate the facade of the Orvietan cathedral with mosaics. The raw materials for glass were local and the villagers' glass-making skills could be utilised by moving them to work in the furnaces in the cathedral yard set up by Maitani. It would appear that these glass-makers subsequently learned how to set tesserae, thus making them capable of performing all the processes involved in making mosaics.

Other political decisions can be seen to have affected the nature of the mosaicists' jobs. In Venice, the state made a decision to move all glass furnaces out of the city in 1291 to the island of Murano. The decision may have rested on a desire to keep the Venetian's knowledge of glass-making secret from potential competitors, or simply to reduce the number of fires in the city, or a combination of those reasons. But, the result of this decision was that mosaicists at the basilica of San Marco did not make their own glass tesserae, but acquired their materials from Murano.<sup>265</sup>

The emergence in Venice of a cadre of painters in the late-fifteenth century appears to have been very influential, reducing the scope of the mosaicists' tasks.<sup>266</sup> Patrons chose to engage the services of Bellini, Titian and Salviati to design mosaic work and produce cartoons. This limited mosaicists' work solely to the processes of setting

---

<sup>264</sup> Munaretto, *Parole di Vetro, Arte e Tradizioni a Piegara dal XIII sec.*, p. 12.

<sup>265</sup> The island of Murano is very close to San Marco where the mosaics were installed so the economic consequence of glass production on Murano is likely to have been slight.

<sup>266</sup> Brown, *The Renaissance in Venice, A World Apart*, p. 54.

tesserae and repairs. Differences in working practices thus illustrate once again a feature that was seen throughout the chapter, namely the significance of each city's individual circumstances.

### **The early sixteenth century**

So, how much work there was for mosaicists at the beginning of the sixteenth century? In general terms, employment opportunities appear to have been severely limited. Very few new mosaics were commissioned and when old mosaics fell into serious states of ruin, rather than being repaired, they were sometimes replaced with paint. As previously mentioned, the bottom half of the apse mosaic in Salerno's cathedral was painted after the tesserae became detached, and there was no apparent attempt to re-install the tesserae. In the church of Santa Sabina in Rome, the whole of the fifth-century apse mosaic was replaced with fresco in 1559-60.<sup>267</sup>

However, around 1500, employment opportunities varied according the city under consideration. In Florence, it appears that there was little or no work for mosaicists, either creating new mosaics or repairing existing ones in the decades following 1300. In the middle of the sixteenth century Vasari reported that the mosaics in the Baptistery were "firm and ... well placed", thus indicating that he saw no need for repairs.<sup>268</sup> Yet later accounts suggest that flaws in the mosaics were disguised by "painting the plaster" rather than being repaired, causing Paolucci to remark that "the practice of working in mosaic was abandoned in Florence at the beginning of the sixteenth century".<sup>269</sup> This may be slightly overstated as Davide Ghirlandaio installed a small lunette mosaic on the exterior of Santissima Annunziata early in the sixteenth century, but this lunette appears to be the last piece of either new or repair mosaic work commissioned in Florence until the eighteenth century.

In Orvieto, there also appear to have been few opportunities for artists to create or repair mosaics around the beginning of the sixteenth century, and skills amongst local

---

<sup>267</sup> Balass, *Taddeo Zuccaro's Fresco in the Apse-Conch in S. Sabina, Rome*, p. 105.

<sup>268</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 289.

<sup>269</sup> Ibid. p. 298. The Baptistery mosaics were eventually restored in 1781 and 1782. According to Lumachi, who documented the restoration programme, the mosaics were "dirty and ruined".

men were seemingly lost. Thus, when the Opera required some repairs to be made to the facade mosaics between 1506 and 1522, it was obliged to employ a Sicilian mosaicist named Francesco di Rinaldo, even though he was apparently not trusted by officials of the Opera del Duomo. Fumi quotes records saying that despite this, the Opera had no other option but to allow Rinaldo continue the restorative work.<sup>270</sup>

Elsewhere in this period, there appear to have been few, if any, employment opportunities for mosaicists in Pisa, Lucca, Naples, Salerno, Siena and Sicily. Rome produced just one opportunity for mosaic work, which was given to the Venetian mosaicist Luigi de Pace in 1516, presumably because artists with suitably high mosaic skills did not exist in Rome, or cities that were nearer than Venice.<sup>271</sup>

In contrast, there was a considerable amount of employment for mosaicists at the Venetian basilica of San Marco in 1500, and for many decades afterwards.<sup>272</sup>

Mosaicists who worked there in the early sixteenth century include Pietro de Zorzi who worked mostly in Saint Clement's Chapel installing new mosaics of the Christ enthroned, the Orant Virgin and Fathers of the Eastern Church. Further mosaicists include Prete Grisogono Novello who installed a new mosaic of the prophet David, Pietro de Zorzi who produced a mosaic of the prophet Zechariah and worked on the sides of altar in the Zen Chapel, Vincenzo Bastiani who was working on the pendentives of the dome in 1512 and Vincenzo Bianchini who installed mosaics on the walls flanking the presbytery.<sup>273</sup> These examples indicate a sizeable amount of employment for mosaicists at San Marco around the beginning of the sixteenth century.

## Conclusion

---

<sup>270</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 469.

<sup>271</sup> Rowland, 'Render unto Caesar the things which are Caesar's: Humanism and the Arts in the patronage of Agostino Chigi', pp. 673-730.

<sup>272</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*. See the photographic record of mosaics that were installed after than 1529.

<sup>273</sup> These are examples and not a complete list. The names were gleaned from the photographic record of mosaics in Caravaggi.

This thesis has shown the existence of at least one hundred and four named mosaicists working in Italy between 1270 and 1529, together with an unknown number of men who worked in twenty groups of anonymous mosaicists. During the Middle Ages and Renaissance, the range of tasks undertaken by these mosaicists was not uniform across Italy. Some mosaicists undertook all of the processes connected with the creation of a mosaic, from making glass and tesserae, to drawing the design, and embedding tesserae in the plaster bed. Other mosaicists worked with glass tesserae bought from elsewhere, and to designs drawn by painters. The range of tasks seems to have depended on where mosaicists worked, and when they worked. The chapter therefore once again illustrates the individuality of Italian cities and it was their different circumstances that encouraged the movement of mosaicists around Italy in search of work. In part, this was how mosaicists responded to the decline in demand for mosaic art that was identified in Chapter 1, but they also sought work in alternative media, especially fresco.

By 1500, there were very few mosaicists left working in Italy, apart from in Venice at the basilica of San Marco. And although these men installed tesserae flat into the plaster bed, rather than at an angle to it in the manner of mosaicists who worked at the end of the thirteenth century, the task of embedding tesserae had not fundamentally changed. Making a mosaic remained a time-consuming task, an issue whose consequences for the art will be discussed in Chapter 6.

## **Chapter 4**

## The Iconography of Mosaics

The large late-thirteenth century mosaic that was installed onto the apse wall of the Romanesque basilica of San Miniato al Monte is a commanding piece of art. It covers approximately sixty square metres and dominates the interior of the dark, Florentine church not only because of its size, but also by virtue of its vast golden background. In the centre of the mosaic is the monumental figure of the blessing Christ, accompanied by the smaller figures of the Virgin and the locally revered saint, San Minias, to whom the church is dedicated. At the base of the mosaic are the symbols of the four evangelists, together with their names in black tesserae, and many exotic birds and palm trees as a detailed allusion to the east, the birthplace of San Minias.<sup>274</sup> It shares many features with other mosaics of the late-thirteenth century. These include its inclusion of Christ and the Virgin, the two most fundamental figures in Christianity, its “standard” depiction of an immediately recognisable Christ, its monumental figures, much decorative detail, and the extensive use of gold tesserae (Plate 2).

The chapter discusses whether the kind of iconography used at San Miniato al Monte continued to be used in the fourteenth, fifteenth and early sixteenth century, and if not, what reasons there may have been for the changes. Were any changes caused by a move away from the basilica style of Romanesque architecture with its windowless and solid walls that provided good sites for these huge mosaics? Or were any of the political, religious, economic and cultural changes within Italian society more responsible for any iconographical changes?

## Methodology

---

<sup>274</sup> Licia Bertani, *San Miniato al Monte* (Rome: Becocci Editore, 2010), p. 47. The mosaic is inscribed with the year 1297, but Bertani considers that this date refers to the date of a restoration, possibly by Gaddo Gaddi. The date of the original mosaic possibly does not pre-date the restoration by much, since the depiction of the symbols of the evangelists bears close similarities to those in Gaddi’s mosaic in the nearby Florentine cathedral that is dated to the late thirteenth century.



In order to analyse the iconography of mosaics within the three time periods developed within this thesis, their subject matter has been divided into five key categories that encapsulate the commonly used iconographies of the time. They are: Christ without the Virgin; the Virgin without Christ; Christ and the Virgin together; John the Baptist; and “other” subjects. The latter category includes amongst other images, Fathers of the Church, locally revered saints, coats of arms, angels, birds and foliage designs. These categories are colour coded in Appendix 3 and divided into the three phases, 1270 to 1329, 1330 to 1449, and 1450 to 1529. However, this analysis is complicated by the existence of complex iconographies in a number of mosaics, particularly those dating to the first period, and the presence of so many narrative mosaics, especially in the two baptisteries in Florence and Venice. To avoid an over-analysis of complex scenes in individual mosaics, only the central character(s) has been ascribed to the relevant category. For example, in the mosaic of *Christ the Pantocrator between the Virgin, San Minias and the symbols of the four Evangelists* in San Miniato al Monte, the major figures of Christ and the Virgin have been ascribed to the relevant category of “Christ together with the Virgin”, but the accompanying subject matter of birds, saints and trees have not been placed in the “other” or “saints” category.

To avoid a similar distortion of the statistics, narrative mosaics, which usually contain multiple images of at least one character, have that character counted only once. For example, at the Roman churches of Santa Maria Maggiore and Santa Maria in Trastevere where mosaics show respectively five and six scenes from the Life of the Virgin underneath the main *Coronation of the Virgin* apse mosaics, the Virgin is counted only once. In the Baptistery of San Giovanni in Florence where there are fifteen small scenes from the life of John the Baptist in the same tier of the vault, his image is also counted once. However, when characters are included in two tiers of the vault as in the case of scenes from the life of Moses and Joseph, the characters are counted twice.

### **Iconographical changes**

Figure 8 gives a visual summary of Appendix 3. To give a sense of proportion, the figure uses percentages to relate the number of images in each category to the total number of images in each period and reveals two important trends. The number of images in the “other” category increased considerably from just over thirty percent in the first phase to double that in the third phase. Meanwhile the number of images of Christ and the Virgin together, as seen at San Miniato al Monte, and in the apse of Santa Maria Maggiore, on the facade at the Orvietan cathedral, and inside the Florentine cathedral, declined.

**Figure 8: Percentage of scenes showing the specified images over the three time periods, 1270-1329, 1330-1449 and 1450-1529**

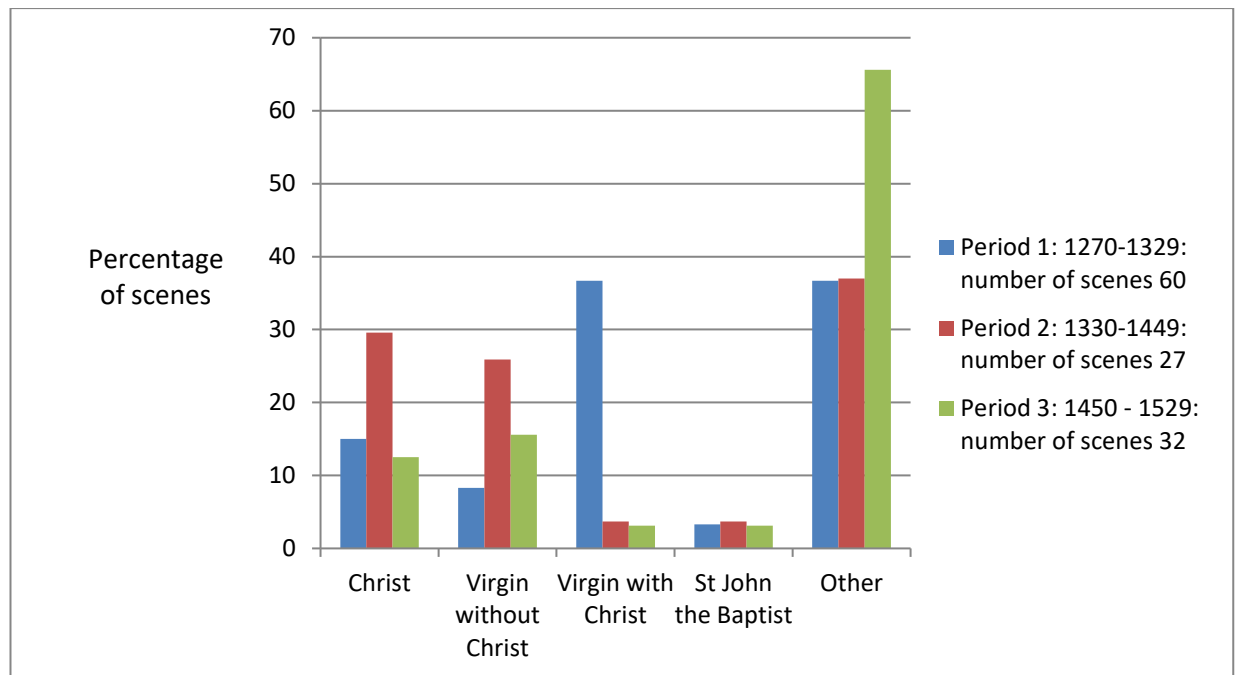


Figure 8 shows that the percentages of images of Christ without the Virgin altered very little in the first and third phase. The peak in the second phase was caused by greater mosaic activity in the Venetian basilica of San Marco, though these images tended to be smaller than those installed earlier, for example, on the facade of Santa Maria Maggiore and the Redeemer image in the Florentine Baptistery.

Images of the Virgin without Christ rose during the second period and this is particularly attributable to the unusually late building and mosaic decoration of a facade at Orvieto's cathedral with images of the Virgin.<sup>275</sup>

The high percentage of images of Christ and the Virgin together in the first phase particularly reflects the popularity of images of the Virgin and Christ Child, especially in Rome. Subsequently, images of Christ and the Virgin declined significantly in the two later periods.

Very few images of John the Baptist were installed in any phase and then almost entirely in narrative mosaics in the Florentine Baptistery and the Baptistery of San Marco in Venice.

What Figure 8 particularly shows, as well as the decline in the Christ and the Virgin images is the very significant rise in the percentage of images in the "other" category, that is, of birds, local saints, vines and foliage designs. By the last phase, images other than Christ and the Virgin, accounted for approaching seventy percent of all mosaic images installed into Italian churches. So, what accounted for these iconographical changes?

### **Architectural changes**

Around the end of the thirteenth century and the very beginning of the fourteenth century, the apses and facades of a number of important Italian churches that were built in the Romanesque style were decorated with mosaic.<sup>276</sup> Leaving aside the complicated structure of San Marco in Venice, approximately eight apses in Romanesque churches were decorated with mosaics, and seven church facades were adorned with the medium. For example, the apse mosaics at San Miniato al Monte and

---

<sup>275</sup> The iconography is unsurprising given that the cathedral is dedicated to the Virgin. Its facade was decorated with mosaic between approximately 1330 and the 1380s. It seems to have been the last church in Italy to have its facade decorated with mosaic.

<sup>276</sup> Romanesque was not a single, standard style. There were local modifications of the Romanesque style but a common feature was massive walls that were not pierced with large, multiple windows. See Caroline Bruzelius, *Preaching, Building, and Burying, Friars in the Medieval City* (New Haven: Yale University Press, 2014), p. 189." For a list of Romanesque churches in Italy, see John Victor Blackwell, *An Historical Catalogue of Italian, French and German Romanesque Architecture and Sculpture*, Ph. D thesis, the University of Iowa, 1957.

the Pisan cathedral were decorated with a vast mosaic image of Christ, together with the Virgin, and a saint that was locally revered, San Minias in the first case, and John the Evangelist in the second case. In Lucca, the facade of San Frediano was decorated with an image of Christ, the Virgin and saints.<sup>277</sup> But this changed. Figure 9 illustrates the declining importance of these apse and facade locations for mosaics as the Romanesque style was superseded by the newer Gothic style of architecture with large rose windows piercing the eastern and western walls of churches. The traditional locations for mosaics disappeared and only “other” locations such as pendentives and lunettes above doors became available for fresco or mosaic decoration.

**Figure 9: Changes in the architectural locations of newly installed mosaics during the three periods, 1270-1329, 1330-1449 and 1450-1529.**

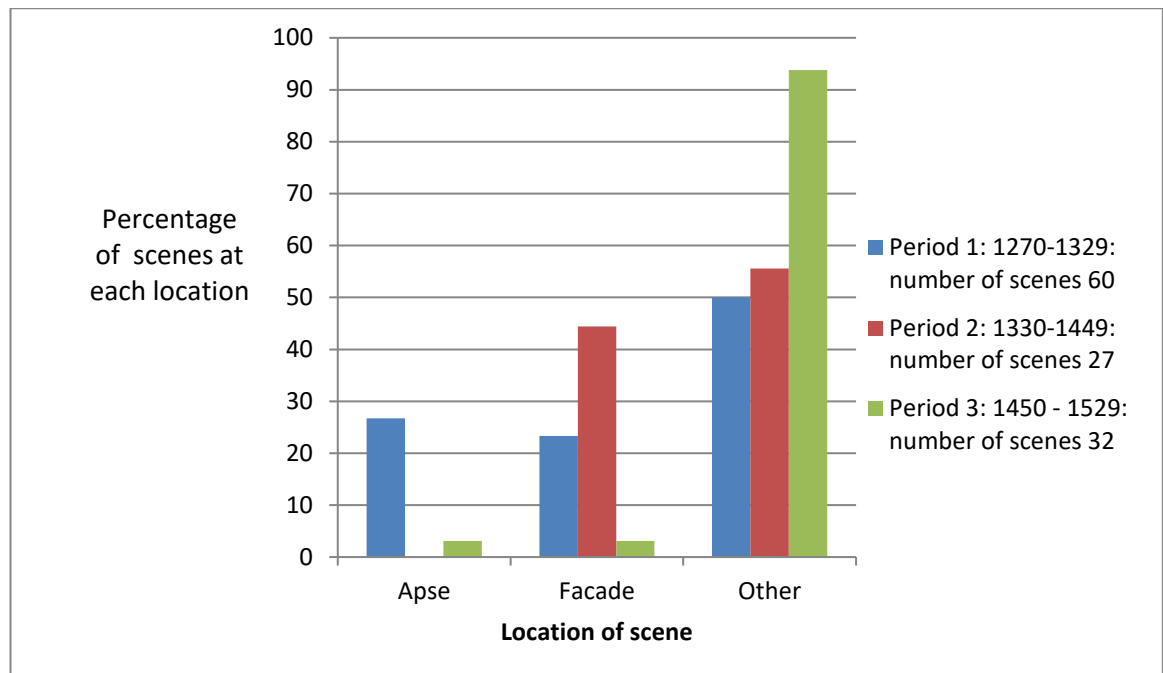


Figure 9 shows that between 1270 and 1329, over one quarter of the images listed in the database were placed in apses. But apses did not remain a site for mosaic decoration. No apses appear to have been rebuilt and enlarged in the second and third periods, as happened at Santa Maria Maggiore and San Giovanni in Rome at the end of the thirteenth century and additionally, few if any Romanesque churches with apses

<sup>277</sup> The image of the Virgin was removed to make way for a small window. The image has been lost.

like San Miniato al Monte were built in Italy in the fourteenth and fifteenth centuries.<sup>278</sup> Furthermore, patrons do not appear to have chosen to replace any existing apse mosaic or fresco decoration with new mosaic decoration.

The percentage of images that were placed on facades increased in the second period. This was primarily attributable to delays in the building of Orvieto's cathedral in the mid-to-late fourteenth century. The cathedral was dedicated to the Virgin and the mosaic decoration of its facade included eight images of the Virgin. The mosaic decoration of the facade at Orvieto and also at Siena was completed by the 1380s and thereafter, little decoration of facades with mosaics occurred. This was partly because of the move towards the Gothic style of architecture which favoured large rose windows and facade walls left plain, as can be seen at the Venetian church of Santa Maria Gloriosa dei Frari that was built in the 1330s (Plate 3). Here, the facade was made with warm red brick, set off with white Istrian stone.

The "other" category shown in Figure 9 encompasses the positions of lunettes above doors and windows, niches, galleries, tribunes and pendentives. Figure 9 shows that by late-fifteenth century, over ninety percent of mosaic images were installed into these smaller and less prestigious locations. These were possibly sites that had not been previously decorated in any medium and the use of them suggests a limited intention to continue using mosaic art. It is very likely that the use of such small sites influenced the iconography of mosaic work.

### **Mosaics in apses**

If the locations of mosaics are considered alongside their iconography, then a connection becomes apparent. As well as their size, apses have high status locations at the privileged east end of churches. They are behind the main altar at which the most sacred liturgies were performed and apses thus form the central focus for congregations of worshippers. The decoration applied to apses thereby had the potential to make a huge impact in churches and this is why, in all likelihood, the

---

<sup>278</sup> Goldthwaite, *The Building of Renaissance Florence*, p. 12. The building boom referred to by Goldthwaite mostly involved the construction of many side chapels onto existing churches in the second half of the fourteenth century, especially in Florence.

iconography of apse mosaics was devoted to the two major figures in Christianity, Christ and the Virgin.

Fourteen apse mosaics were installed into Italian churches with Romanesque style architecture between 1270 and 1329. San Miniato al Monte has already been used as an example, but others were installed into Roman churches. The apse mosaic at Santa Maria Maggiore in Rome was installed into a newly enlarged apse in the late thirteenth century and its patrons, Nicholas IV and Cardinal Giacomo Colonna, chose to decorate it with a vast mosaic of the *Coronation of the Virgin* showing monumental images of the Virgin and Christ seated on a large and highly decorated throne, set against a starry sky with the sun and moon at their feet (Plate 4).<sup>279</sup> The large size of the apse also allowed the mosaicist to add twenty-three additional figures. They include six saints, including the more recent mendicant saints, Francis of Assisi and Anthony of Padua. All the saints are shown the same size, although much smaller than Christ and the Virgin. The two donors are also shown, depicted as miniaturised kneeling figures. The mosaic is completed with eighteen winged angels, vast whorls of acanthus leaves, twenty-two birds of differing species, two mammals and inscriptions that name the saints and entitle the mosaic. Occupying a frieze below the main scene are four rivers of Paradise giving life to the birds, mammals and people of the world. The apse is finally completed with five separate mosaic scenes from the *Life of the Virgin*, the largest one representing the *Dormition of the Virgin* which is placed centrally below the image of the Virgin as the Queen of Heaven. By virtue of the mosaic's great size and position, the monumental figures of two fundamental characters in the Christian faith are thereby able to dominate the large interior of the old basilica of Santa Maria Maggiore.

In the cathedral of San Giovanni in Laterano in Rome, the patron, Pope Nicholas IV, chose to decorate the central apse with a large mosaic featuring the most significant figure in Christianity (Plate 5).<sup>280</sup> Christ is shown in a large bust portrait, set amidst a

---

<sup>279</sup> Cooper, *The Making of Assisi*, pp. 27, 28. See also Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304*, p. 260. After Nicholas IV's death in 1292, Cardinal Giacomo Colonna continued the project.

<sup>280</sup> Cooper, *The Making of Assisi*, p. 22. Pope Nicholas IV created a new and loftier apse for San Giovanni in Laterano. In consort with Cardinal Giacomo Colonna, he commissioned the new mosaic, probably re-using the bust of Christ. It was completed in the 1290s. The current apse mosaic is a nineteenth-century replacement. See Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304*, p. 257.

clouded sky and surrounded with nine winged angels. Once again, the vast size of the apse mosaic allows a wealth of detail to be included. From the bust of Christ descends the dove of the Holy Spirit, from whose beak emits a stream of water that cascades over a jewelled but empty cross and falls into rivers of Paradise that give life to birds, mammals and mankind. The vast size of the apse mosaic allows the inclusion of nine further figures. Either side of the cross stand the Virgin, Saint John the Baptist and six saints. The figures of the mendicant saints Francis and Anthony are included, though miniaturised rather than the same size as other the saints, as they are at Santa Maria Maggiore. Also figuring is the diminutive figure of the kneeling donor. But dominating the apse mosaic is the central portrait of Christ.

The eleventh-century cathedral in Pisa also has a large, central apse that was decorated with mosaic just after 1300 and it also features a monumental figure of Christ (Plate 6).<sup>281</sup> As at San Miniato al Monte, the image of Christ is instantly recognisable. He is shown seated on a cushioned stool, holding in His left hand a book announcing Himself as the Light of the World. With His right hand, He blesses the congregation. He is accompanied by the smaller figures of the Virgin and Saint John the Evangelist. All three figures are set against an extensive golden ground. The apse mosaic in the chapel of Santa Reparata, which forms the oldest part of Naples cathedral, shows a monumental, majestic and enthroned Virgin, rather similar to the regal figure in Santa Maria Maggiore, though in Naples, she is shown as the Mother of Christ, with the Son of God on her lap.<sup>282</sup>

Thus, the mosaic decoration of the apses in basilica style churches in the period 1270 to 1329, appear to be almost entirely associated with monumental images of Christ and the Virgin. Although their joint images can be seen occasionally on facades, for example at Santa Maria Maggiore in Rome, they commonly appear together usually in

---

<sup>281</sup> Malafarina, *Il Duomo di Pisa*, p. 172. The figure of Christ was completed by 1302 but the whole mosaic was only completed in 1321. See also Luciano Bellosi, *Cimabue*, trans. by Frank Dabell, Alexandra Bonfante-Warren and Jay Hyams (New York: Beville Publishing Group, 1998), p. 283.

<sup>282</sup> Following a subsequent and extensive enlargement of the cathedral, the apse with its mosaic is now in a side chapel. Vinni Lucherini, '1313-1320: il cosiddetto Lello da Orvieto, mosaicista e pittore, a Napoli, tra committenza e episcopale e committenza canonica', in *El Trecento en Obres: Art de catalunya i art d' Europa al segle XIV*, ed by Rosa Alcoy (Barcelona: Grup d'investigacio Emac, 2009), p. 185. See also Claudia D'Alberto, 'Arte come Strumento di Propaganda: Il mosaico di Santa Maria del Principio nel Duomo di Napoli', *Arte Medievale* (2008), pp. 105-123.

apse mosaics. These monumental images of Christ and the Virgin are always accompanied by many additional figures, a great wealth of detail and large areas of golden background so that they dominate the interiors of their buildings. With the decline of apse mosaics after the first period 1270 to 1329, monumental images of Christ and the Virgin tended to disappear.

### **Mosaics on facades**

Another frequently occurring architectural location for mosaics during the first phase was church facades. Nine churches had facades decorated with mosaic between 1270 and 1329. In Rome, these include Santa Maria Maggiore, San Paolo fuori le Mura, San Giovanni in Laterano, Santa Maria Aracoeli, San Pietro and possibly Santa Maria in Trastevere, although the date is insecure. Outside of Rome, facade mosaics were installed at the cathedral in Lucca and the nearby church of San Frediano, and at San Miniato al Monte in Florence. In the second period, mosaics were installed only on the facade of Orvieto's cathedral and in the third period, just a very small mosaic was installed in a lunette above a doorway in the facade of the Pisan cathedral.

Like apses, church facades are also high status positions. Facades are large and amongst other functions, form the dividing line between the outer secular world and an inner sacred space. They provide an opportunity for a patron to emphasise this and set the scene for contemplation, reverence and worship within the building. Records relating to those facade mosaics that are lost, and observation of those that have survived, suggest that Christ was the most frequently occurring image to be installed on facades between 1270 and 1329.

The lost facade mosaic at San Paolo fuori le Mura supports this proposition since the iconography is said to have included a medallion of Christ.<sup>283</sup> It also included images of the Virgin and Child, Saint Paul to whom the church is dedicated, symbols of the evangelists, angels and Saint John the Baptist presenting Pope John XXII to the Virgin, all of which are indicative of the mosaic's monumental size. If it is accepted that one of the facade's functions is to separate the secular world from the sacred place within,

---

<sup>283</sup> Bussagli, *Rome, Art and Architecture*, p. 340.



and prepare those who entered to reverence God, then the predominating portrayal of the deity is fully explicable.

Other Roman churches also predominantly featured Christ in their facade mosaics. For example, at San Giovanni in Laterano, the facade mosaic showed the standing figure of Christ flanked by two angels. It was subsequently destroyed, but a record of it survives in a painting of the Lateran by Giotto in the Pisan church of San Francesco.<sup>284</sup> The facade mosaic at Santa Maria Maggiore shows a series of narrative mosaics illustrating the legend of the church's foundation but dominant amongst these scenes is a large roundel showing Christ accompanied by four angels.<sup>285</sup> He is holding a book announcing Himself as the Light of the World and blessing those about to pass under His image and enter the sacred inner realm of the church to worship Him.

Christ also figured in the lost *Navicella* facade mosaic that was installed at the behest of Cardinal Giacomo Stefaneschi on the facade of the original basilica of San Pietro in Rome, around 1300.<sup>286</sup> The iconography of the mosaic is shown in drawings made in later centuries after it was moved to the newly built San Pietro, and before its eventual destruction.<sup>287</sup> Unusually, the drawings do not show a monumental image of Christ, but rather the small figure of Christ offering support to Peter as he struggles through stormy waters, watched by terrified disciples who are clinging to a listing ship.<sup>288</sup> It is the only known mosaic from this period of 1270 to 1329 with this particular iconography and it appears to portray an allegory, Christ's support to the Church at a troubled time in its history.

Outside of Rome, the facade mosaic of the Florentine basilica of San Miniato al Monte also shows a monumental image of Christ (Plate 7). He is seated and holding up his right hand to bless the worshippers who are about to enter into the sacred interior of the church. The iconography thus bears some similarities to that on the facade at

<sup>284</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304*, pp. 45, 259.

<sup>285</sup> Roberta Vicchi, *The Major Basilicas of Rome* (Florence: Scala, 1999), p. 123.

<sup>286</sup> White, *Art and Architecture in Italy: 1250-1400*, pp. 337, 338. See also Kempers, 'Jacopo Stefaneschi, Patron and Liturgist', pp. 83-113. A New Hypothesis Regarding the Date, Iconography, Authorship and Function of His Altarpiece for Old Saint Peter's'. This article proposes views on the dating of this mosaic.

<sup>287</sup> Zucker, 'Parri Spinelli drawings Reconsidered', p. 431. The mosaic is associated with Giotto. Two remaining fragments are in the Museo Petriano and the Palazzo Venezia, Rome.

<sup>288</sup> Ibid. p. 436.

Santa Maria Maggiore. Standing on either side of Christ are the much smaller figures of the Virgin and the locally revered saint, San Minias, and they are set against an expansive area of plain golden tesserae. In sunlight, the facade mosaic featuring the blessing Christ dominates its locality and the same is true of the facade mosaic at San Frediano, in Lucca (Plate 8).<sup>289</sup> This mosaic shows the Ascension of Christ as a monumental figure rising in the heavens, carried upwards by two angels that are larger in scale than Christ. His ascent is watched by the smaller figures of the twelve disciples who stand in a line across the base of the mosaic. Originally, the Virgin was placed in the middle of the disciples, but her image was subsequently removed to create space for the insertion of a window and it has been subsequently lost.<sup>290</sup> Like the facade mosaic at San Miniato al Monte, the facade is visible from a distance and in bright sunshine, the colourful and golden mosaic dominates its surroundings.

There are only two examples of facade mosaics that were installed in the first period that do not appear to have included a main image of Christ.<sup>291</sup> The first is the Franciscan church of Santa Maria Aracoeli in Rome.<sup>292</sup> The mosaic was installed between 1288 and 1292 by an unknown patron and mosaicist, but was subsequently destroyed.<sup>293</sup> It is known from early sources to have illustrated Pope Innocent III's prophetic dream of the collapse of the physical building of the cathedral of San Giovanni in Laterano, and Saint Francis of Assisi's action in preventing this from happening. The dream may have been interpreted as signalling the collapse of the Christian Church in the west and Saint Francis as its saviour. It is a legend that provided great encouragement during the foundation of the Franciscan movement.<sup>294</sup> This unique iconography, unknown on the facade of any other Italian church, could plausibly be explained by the patron's desire to emphasise the role of the Franciscan

---

<sup>289</sup> The date of this mosaic is insecure. It has been dated, for example, to the mid-thirteenth century by Giorgio Giorgi and Nicolai Umberto, *Le Tre Basiliche di S. Frediano, nella Storia e nell'Arte* (Lucca: Maria Pacini Fazzi Editore, 1998), p. 39. See also Franco Bellato, *La Basilica e il Monastero di San Frediano in Lucca* (Lucca 1998), pp. 17-20.

<sup>290</sup> Giorgi, *Le Tre Basiliche di S. Frediano, nella Storia e nell'Arte*, p. 39.

<sup>291</sup> Although, there is a third exception to this statement at the cathedral of Orvieto. The facade mosaic was decorated with images of the Life of the Virgin as the cathedral is dedicated to the Virgin.

<sup>292</sup> Cooper, *The Making of Assisi*, pp. 21 - 22. The church was subsequently re-orientated and the mosaic's plaster base now shows on the right-hand return of the present facade.

<sup>293</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 119 - 1304*, p. 225.

<sup>294</sup> Cooper, *The Making of Assisi*, p. 21. Pope Innocent III reigned from 1198-1216. Saint Francis of Assisi died in 1226.

movement in reforming and invigorating the Catholic Church, whose problems are symbolised by the tumbling building. This proposition is perhaps strengthened by the mosaic's position facing towards the distant cathedral of Rome, San Giovanni in Laterano.

The only other example of a facade mosaic that did not include a main image of Christ is provided by the Roman church of Santa Maria in Trastevere. Unlike the much larger mosaics discussed so far, the mosaic takes the form of a long, narrow frieze that traverses the width of the facade of the church. Dating of the mosaic is exceedingly insecure. Work on the mosaic is thought to have been begun in the twelfth century and been completed in the fourteenth century.<sup>295</sup> The iconography includes the small central figure of the Virgin lactans who is suckling a small, but adult-looking Christ Child, flanked by ten women who vary in stature. Only some of the women carry oil lamps and the iconography is enigmatic.<sup>296</sup> Amongst the various interpretations of the iconography include the hypothesis that it represents the Wise and Foolish Virgins before a wedding feast.<sup>297</sup> It is an untypical facade mosaic in terms of its prolonged execution, physical shape and placement on the facade. It is also the only known mosaic to feature ten secular women.

Clearly, the most common subject for a facade mosaic was a large figure or bust of Christ. No other image assumes such a major role within facade mosaics and in this respect, the iconography of facade mosaics differs from apse mosaics, where the Virgin also features significantly. But just as apses disappeared when the Gothic style of architecture became popular, facades became the focus of new decorative devices especially large rose windows, or patterns of red brick and white Istrian stone as previously mentioned at Venetian churches, such as Santa Maria Gloriosa dei Frari (Plate 3).<sup>298</sup> The virtual disappearance of apses and facades after the early fourteenth century as locations for mosaic work therefore explains the fall in the number of images of Christ and the Virgin after the first period.

---

<sup>295</sup> Cristina Marchei, *S. Maria in Trastevere* (Milan: Silvana Editoriale, 1999), p. 28.

<sup>296</sup> Ibid. pp. 47-56.

<sup>297</sup> The Gospel of Saint Matthew, Chapter 25, verses 1-13.

<sup>298</sup> Santa Maria Gloriosa dei Frari was built in the 1330s.

### **Mosaics in other architectural positions**

Appendix 3 shows that between 1270 and 1329, twenty-one images were installed in architectural positions other than in apses or on facades, in a total of eleven churches. These churches were spread widely across Italy, from Venice, through Tuscany, to Rome, and Sicily, indicating that the installation of these small mosaics of approximately a square metre, or less in size was common. The appendix shows that the majority of the images installed into these small spaces illustrate narratives from Genesis, including those about the lives of Joseph and Moses. These narrative scenes mostly appear in the Florentine Baptistery of San Giovanni. The remaining images were also narrative scenes from the lives of Saint Mark and the prophets for example, and were used to decorate niches and other small areas in San Marco, Venice. In this first phase, small mosaic images installed into any buildings other than the Florentine Baptistery and the Venetian basilica were all part of a narrative sequence.

Between 1330 and 1449, the number of small images that were installed into “other” locations rose, but they were installed into just four churches. Just over half of these images (seven out of 13 images) were installed in San Marco, perhaps because there was not much space left. They include 17 narrative scenes from the life of San Isidore, a martyr and patron saint of Chios whose remains were removed by the Venetians in 1125.<sup>299</sup> Elsewhere during this second period, the images were not generally narrative scenes but rather unconnected images such as the Fathers of the Church, the evangelists, the patriarchs and other such holy figures.

A significant change appears during the third phase, 1450 to 1529, when approximately sixty-five percent of mosaic images (21 images) were installed into “other” architectural positions, especially in lunettes above doorways. This occurred in just five buildings, the cathedrals of Florence and Pisa, the Palatine Chapel in Palermo and Santissima Annunziata, also in Florence, but again, especially in San Marco in Venice. The mosaics depict not narrative scenes, but rather unconnected images, for

---

<sup>299</sup> Paul Hetherington, *The Greek Islands. Guide to the Byzantine and Medieval Buildings and their Art* (London: Quiller Press, 2001), p.33.

example, locally revered saints such as Santa Reparata, the Virgin Assumpta or Annunciata, and John the Baptist (Plate 9). At the Pisan cathedral, a late-fifteenth century lunette mosaic above a doorway shows Santa Reparata seated, in order to save space. The red tesserae used on the front of her throne shine out and dominate this small mosaic. There was little room for any contextual scenery in this lunette so she was set against a background of gold tesserae.<sup>300</sup> The use of plain golden backgrounds in these small mosaics may have affected the way in which mosaics were viewed in the late fifteenth and early sixteenth centuries. During the Renaissance, white and blue were usually favoured especially for sacred spaces, as they indicated “dignity”. Gold had become associated with the “crude richness” of the past.<sup>301</sup> Other lunette mosaics installed between 1450 and 1529 did not show any figures but rather, relatively restrained foliage and geometrical designs to complement a piece of sculpture, for instance (Plate 10).

### **Influences on Iconography**

There thus appears to be a correlation between the iconography of mosaics and the architectural position into which they were installed. In the first period between 1270 and 1329, large areas of wall space were available for decoration in the Romanesque churches of Italy. Large apse mosaics tended to show monumental images of the Virgin, sometimes with Christ as a Child. At other times, He was shown as an adult, often accompanied by a great wealth of elaborate detail such as birds of many species and stylised acanthus and vines leaves. Large facade mosaics were more inclined to feature Christ, sometimes blessing those about to enter the church, although there was an exception at Orvieto, where the cathedral, which is dedicated to the Virgin, shows scenes from her life.

As the Romanesque style of churches became superseded by new buildings in the Gothic style, uninterrupted areas of wall at the eastern end of churches disappeared. What had once been apse walls that could be decorated with mosaics were replaced

---

<sup>300</sup> Santa Reparata was a local saint and prior to the late thirteenth century, the cathedral of Florence was dedicated to her. In the lunette image of her that was installed in the late-fifteenth century, she is holding a scroll bearing her name, presumably to remind people who she was.

<sup>301</sup> Hills, *Venetian Colour*, p. 153.

with walls that were pierced with windows in the new buildings. These windows were often filled with brilliantly coloured, stained glass. Additionally, the flat Romanesque facades that had once been decorated with mosaic images were replaced in the new buildings by western walls that were decorated with Gothic-styled rose windows or sculpture. Thus, from approximately 1300, the walls of the new churches were not embellished with mosaics. But mosaic art did not disappear. It continued to be used in older buildings such as San Marco in Venice. This church may have been running out of large spaces for mosaic work which may explain why the decorative medium was relegated to smaller and less prestigious architectural positions, such as pendentives and lunettes over doorways. The iconography and design of these smaller mosaics adapted to the limited confines. They moved away from depicting the two central figures of the Christian faith that had been depicted monumentally in the past, for instance the huge figure of Christ in the apse mosaic in Pisa's cathedral, towards subject matters that were less central to the Christian faith, for example, locally revered saints. No longer were multiple scenes used from the lives of biblical characters, such as those that were installed in the Florentine Baptistery in the first period and the Venetian basilica of San Marco in the second period. This was undoubtedly due to a lack of space in buildings that were already heavily decorated with mosaic art.

Instead, these small mosaics were more limited in the number and size of figures and symbolic devices that could be included in their iconography. In 1504, Davide Ghirlandaio was commissioned to create a small lunette mosaic above the main entrance into the Florentine church of Santa Annunziata. In keeping with the church's dedication, the mosaic shows the Virgin Annunciate on the left-hand side of the mosaic and the angel Gabriel on the left, holding a lily, symbol of the Virgin's purity and the city of Florence. Both figures are kneeling, possibly because of the small size of the mosaic (Plate 11). Missing from the mosaic are symbols that are often included in depictions of the Annunciation, notably the hand of God and the dove of the Holy Spirit moving towards the Virgin's womb. In this early sixteenth-century mosaic however, the two figures are set against a plain gold background, a colour it shares with much older mosaics of the late-thirteenth century.

A side doorway into the Pisan cathedral has a small lunette decoration above it that probably dates to the mid-fifteenth century. It features a sculpture that is framed by a wide band of mosaic whose iconography is limited by its size and features bows of ribbon, fruit and leaves, angels' heads and geometrical designs. The mosaic's function may have been to enhance and add prestige to the sculpture that it frames.<sup>302</sup> Alternatively, it may have been used to add colour to the decoration and draw attention to the doorway. It provides a rare example of a piece of wall mosaic being used to complement another piece of art work.

A further small lunette above one of the main entrances into the Pisan cathedral was also decorated with mosaic in the mid-fifteenth century, this time by a known mosaicist, Alesso Baldovinetti. Like most of the small mosaics installed after approximately 1300, its iconography is limited by its size and does not include an image of one of the central figures of the Christian faith, or much detail. Rather, Baldovinetti's mosaic shows a locally revered female saint, Santa Reparata, and two small features, a scroll bearing the saint's name and one symbol, a wand of twigs that perhaps indicate she was burnt to death for her faith.<sup>303</sup> The background is once again composed of gold tesserae in the manner of mosaics that were created a century and a half previously.

### **Other influences on iconography**

Whilst the architectural position of mosaics appears to have influenced their iconography, there are other potential influences. One is the religious changes that affected Italy during the thirteenth century. The mendicant movement dominated Italian religious life in the thirteenth and fourteenth centuries and it moved religious practice away from the ritualised administration of the sacraments, towards preaching the gospels. There were two negative consequences for the art of mosaic that

---

<sup>302</sup> This mosaic does not appear to have been recorded in any texts. I have dated it by assuming that it was installed at the same time as the sculpture by Andrea Guardi. The two elements, sculpture and mosaic, appear to complement each other and there are no signs of alterations to the whole device such as would suggest that the mosaic was installed at a different date to the sculpture. (Fieldwork observation).

<sup>303</sup> The Florentine cathedral was first dedicated to Santa Reparata and its facade bears a statue of her. She was a revered martyr in Florence, as well as in Naples.

emanated from the popularity of the mendicants. Preaching was best suited to the Gothic style of architecture, with its many windows that could shed light on the preacher, but the style was not as suited to the art of mosaics as the older Romanesque style of building. The mendicants also espoused poverty and simplicity during its early history, and might be expected therefore to have eschewed the opulence of mosaic art. For the most part, the mendicants did ignore the art, but a small number of leading members of the Franciscans were unusually instrumental in the patronage of mosaic in the period 1270 to 1329.<sup>304</sup>

Mendicant patrons of mosaics include the Minister General of the Franciscan Order from 1287, Cardinal Matteo Acquasparta (c. 1240 - 1302), Pope Nicholas IV and Cardinal Giacomo Colonna.<sup>305</sup> Evidence for Acquasparta's interest in mosaics comes from his canopied and richly decorated tomb in the Roman mendicant church of Santa Maria Aracoeli. It is large and seemingly not meant to be overlooked. The tomb incorporates several media including a sculpted stone effigy and a painted image of the Virgin and Child accompanied by two saints, one of whom is Saint Francis of Assisi. The whole ensemble is extensively embellished with red and gold mosaic work, arranged in geometrical patterns. Although Acquasparta is not known to have commissioned wall mosaics, this tomb suggests that the opulence of mosaic work was acceptable, or even desirable, to at least some powerful officials within the Franciscan order.

However, it is the first Franciscan pope, Pope Nicholas IV, who emerges as a significant patron of mosaic work and the iconography he chose reflects his religious attachment to the order. He commissioned large apse mosaics for at least two major churches in Rome, San Giovanni in Laterano and Santa Maria Maggiore, and it is notable that Nicholas IV chose to proclaim his affiliation to the Franciscans in mosaic lettering. In an inscription in San Giovanni in Laterano, he described himself as, "A child of Francis".<sup>306</sup>

---

<sup>304</sup> Louise Bourdua, *The Franciscans and Art Patronage in Late Medieval Italy* (Cambridge: Cambridge University Press, 2004), p. 1, where she says that mendicant values are still considered by some scholars to be "incongruous with the production of art" a position that she challenges but not specifically with regard to mosaic work.

<sup>305</sup> Cooper, *The Making of Assisi*, p. 46.

<sup>306</sup> Cooper, *The Making of Assisi*, pp. 26, 27.



The value that Nicholas IV placed on mosaic may also be inferred from his action to “save” a fourth-century mosaic bust of Christ that he incorporated into his newly commissioned apse mosaic in San Giovanni in Laterano in the 1290s.<sup>307</sup> This precious bust dominated Nicholas IV’s new large apse mosaic by virtue of its central position, size and setting against a dark, cloudy sky (Plate 5).<sup>308</sup>

Nicholas IV also used this mosaic to portray the images of the mendicant Saints Francis of Assisi and Anthony of Padua. These far more recent saints were placed alongside the images of the apostolic saints Peter, Paul, Andrew, and John the Evangelist and John the Baptist in the apse mosaic of San Giovanni.<sup>309</sup> This is thought to have been the first time that the thirteenth-century mendicant saints had been placed in the company of the apostolic saints and their inclusion in the mosaic may have been seen by contemporaries as a ground-breaking piece of iconography and propaganda.<sup>310</sup> The message concerning the equality of the Franciscan saints with the apostolic saints recurs in Nicholas IV’s commission for the apse mosaic of Santa Maria Maggiore, where Saints Francis and Anthony this time are audaciously shown the same size as the apostles, as if to imply their equality.

Images of the men who had installed mosaics rarely figure in the subject matter of their mosaics.<sup>311</sup> There are only two known exceptions, and both mosaicists included in the mosaic were shown dressed as Franciscan monks and probably feature as a piece of propaganda. One, Jacopo of Camerino, is shown with a hammer and a block of stone, whilst the other, Jacopo Torriti, holds a set square and compass.<sup>312</sup> It is probably significant that the two Friars Minor are shown engaged with the rebuilding and redecoration of Rome’s cathedral. Those who gazed upon the mosaic at the time of its completion are likely to have been familiar with the legend of Pope Innocent III’s dream. In the legend, which was shown in a mosaic at Santa Maria Aracoeli, Saint

---

<sup>307</sup> Matilda Webb, *The Churches and Catacombs of Early Christian Rome* (Brighton: Sussex Academic Press, 2010), p. 43.

<sup>308</sup> The apse mosaic was heavily restored in the 1880s.

<sup>309</sup> Though at San Giovanni in Laterano, Rome, the two mendicant saints are shown as miniaturised figures.

<sup>310</sup> Cooper, *The Making of Assisi*, p. 24.

<sup>311</sup> Though Giotto is shown working on a piece of mosaic art in one of the sculptured plaques on the bell-tower of Florence’s cathedral.

<sup>312</sup> Cooper, *The Making of Assisi*, p. 25.

Francis “saved” the cathedral from destruction. Thus, it would have been possible for viewers of the mosaic to connect the Franciscan Order once again with “saving” the cathedral, or perhaps even, the whole institution of the western Church. Furthermore, mosaic inscriptions near the apse were probably meant to highlight Nicholas IV’s own contribution towards supporting the cathedral of San Giovanni in Laterano, and the reference to himself in the inscription as the “son of the blessed Francis” suggests that Nicholas IV saw himself as the living embodiment of Saint Francis of Assisi, and also destined to “save” the Church.<sup>313</sup>

The apse mosaic within the Roman church of Santa Maria Maggiore also shows evidence of the Franciscans’ use of iconography to promote their particular beliefs. The patron was again Pope Nicholas IV, in collaboration this time with his supporter for the papacy and fellow Franciscan, Cardinal Giacomo Colonna. Their choice of a majestic interpretation of the Virgin featuring her Assumption to become the Queen of Heaven reflected the Franciscans’ particular devotion to the Virgin (Plate 4). Nicholas IV’s devotion is clear in his letters to Cardinal Colonna which laud the Virgin’s virtues and describe her as rising above the sun and the moon and his involvement in iconographical decisions may be inferred from the inclusion of the sun and moon in the mosaic beneath the Virgin’s feet.<sup>314</sup> Furthermore, the placement of the Virgin sitting alongside Christ almost as His equal and on the same elaborately decorated throne, further illustrates the Franciscans’ belief in the Virgin’s elevated theological position. The movement’s devotion to the Virgin and her presumed attachment in return to the Franciscans is further illustrated in the Dormition scene, which is placed centrally below the main apse image of the Virgin and Christ. In this scene from the *Life of the Virgin* series, two Franciscan friars in habits kneel in prayer before the Virgin’s bier. A nearby inscription, like the inscription at the cathedral of San Giovanni in Laterano, seems designed to serve a very similar purpose, namely to enhance Nicholas IV’s own personal status and authority. At Santa Maria Maggiore, the mosaic inscription proclaims, “May father Francis preserve his apostolic pupil. At the request

---

<sup>313</sup> Cooper, *The Making of Assisi*, p. 22. Nicholas IV rebuilt the apse and facade of San Giovanni, as well as other parts. The work was so extensive as to render the building unusable in the 1390s thereby explaining why Nicholas IV took up residence at Santa Maria Maggiore.

<sup>314</sup> Ibid. pp. 28, 241, note 88. The letters date to August and September 1288.

of His mother, may the Almighty protect and bless him.”<sup>315</sup> By referring to Saint Francis as “father” and the Virgin as “mother”, it would seem that Nicholas IV is referencing his own prestigious antecedents and support, and thereby raising his status and authority within the Church.

Although San Giovanni in Laterano and Santa Maria Maggiore possess the largest and clearest examples of Franciscan influence on the iconography of mosaics in Italy, the unknown patrons of the mosaics at the Franciscan church of Santa Maria Aracoeli also used the medium to indicate their attachment to Saint Francis. The church contains a late thirteenth-century mosaic of the Virgin and Child that includes the standing figure of Saint Francis and its facade mosaic featured scenes from the Life of Saint Francis, with the image of the Saint holding up the tumbling building of San Giovanni in Laterano.<sup>316</sup> This alludes to the dream of Pope Innocent III referred to earlier.

Despite strong Franciscan influence on the iconography of mosaics at the Roman churches of San Giovanni in Laterano, Santa Maria Maggiore and Santa Maria in Aracoeli, no other church in Rome appears to have had mosaics installed between 1270 and 1329 that encapsulated the beliefs of the Franciscan Order. And, although the Order spread across Italy and was particularly popular in Tuscany and Umbria, mosaic does not appear to have been used in Franciscan churches such as Saint Francis of Assisi or any of the regions’ major cities, including Florence and Pisa.<sup>317</sup> In northern Italy, the Franciscan church of Santa Maria Gloriosa dei Frari in Venice contains no mosaic decoration, even though the nearby procurators at the basilica of San Marco were continuing to commission mosaic work during the first half of the fourteenth century, when the Frari was built.<sup>318</sup> There also appear to be no examples in southern Italy or Sicily of the Franciscans using mosaic as a decorative medium. In essence, it appears that the Franciscans did not generally favour mosaic art. Primarily, it was only

---

<sup>315</sup> Ibid. p. 29, where Cooper quotes the inscription.

<sup>316</sup> The mosaic of the Virgin and Child with Saint Francis is a detached fragment in the Capella di Santa Rosa da Viterbo. The facade mosaic has since disappeared.

<sup>317</sup> Bourdua, *The Franciscans and Art Patronage in Late Medieval Italy*, p. 3, though the Franciscan movement spread beyond these two provinces, into Venice for example. The Franciscans built the church of Santa Maria Gloriosa dei Frari in the 1330s. The basilica of Saint Francis of Assisi has one very small image of the saint worked in mosaic on the outside of the building.

<sup>318</sup> San Marco in Venice is not a Franciscan church.

Nicholas IV who used the iconography of mosaics for propaganda purpose, to establish his own links with Saint Francis, thereby enhancing his own personal authority and promoting the status of the Franciscan Order within the Roman Church.

The mosaic art of early Christian Rome may be a possible further influence on the iconography of mosaics, particularly those that were installed in the late-thirteenth century in Rome. Two mosaics appear to display such an influence. They are the apse mosaics at San Giovanni in Laterano and Santa Maria Maggiore, previously discussed in terms of their Franciscan associations. In the case of San Giovanni in Laterano the early Christian influence can be seen in the retrieval and reuse of the fifth-century emblem of Christ's bust and in the scene at the base of the apse mosaic where mammals, birds and people are given life by a flowing river. The inclusions of rivers, often the four rivers of paradise, can be seen in the early-sixth century apse mosaic at Santi Cosma e Damiano, for example. A similar watery scene can be seen at the base of the apse mosaic in Santa Maria Maggiore, and further early Christian symbols can be seen in the upper zone of this mosaic. Here, there is an extensive use of vast whorls of stylised acanthus leaves and vines inhabited by realistically portrayed birds. This may exhibit the patrons' awareness of the iconography in the fourth-century mausoleum of Santa Costanza that depicts many birds of various species and stylised leaves and fruit.<sup>319</sup> Alternatively, it is possible that the iconography of the mosaic in Santa Maria Maggiore was influenced by the old mosaic on the original fifth-century apse, which was left in place until the new, larger apse had been built and decorated.<sup>320</sup> This arrangement may have inspired Nicholas IV to ask the mosaicist Jacopo Torriti to preserve sections of the original mosaic and include them in the new mosaic, as he did at San Giovanni in Laterano. However, this has not been verified. Otherwise, it is possible that the fifth-century mosaic may have represented a reference point for Torriti, and influenced the

---

<sup>319</sup> Hugo Brandenburg, *Ancient Churches of Rome from the Fourth to the Seventh Century - The Dawn of Christian Architecture in the West* (Turnhout, Belgium: Brepols publishers, 2004), pp. 15, 16. See also Nancy Ramage and Andrew Ramage, *Roman Art*, 5th ed. (New Jersey: Pearson, Prentice Hall, 2009), p. 356.

<sup>320</sup> H. Henkels, 'Remarks on the Late 13th Century Apse Decoration in Santa Maria Maggiore', *Simiolus: Netherlands Quarterly for the History of Art*, Vol. 4, No. 3, 1971. The subject matter of the original mosaic in this location is not known.

way in which the eyes of Christ and the Virgin are averted, the splendour of the throne and footstall, and vast golden background.

The series of mosaic scenes from the Life of the Virgin that were installed in the late thirteenth century in Santa Maria Maggiore and Santa Maria in Trastevere also owe debts to early Christian thinking. They illustrate the old Marian feasts of the *Purification*, the *Annunciation*, the *Nativity* and *Assumption*, though they also include allusions to *all'antica* in their depiction of classical buildings. In the *Nativity* scene for instance, the manger, an important artefact at Santa Maria Maggiore since it held a relic of Christ's crèche, is afforded more status by being surmounted with classically inspired architecture.<sup>321</sup> The inclusion of classical buildings is repeated in other scenes in both Santa Maria Maggiore and Santa Maria in Trastevere, where for example, the *Annunciation* scene shows the Virgin seated upon a large, canopied and classically pillared throne.<sup>322</sup>

However, the whorls of leaves and birds and other early Christian motifs seen at Santa Maria Maggiore were not repeated elsewhere in Roman mosaics between 1270 and 1529. Nor were they repeated in mosaics outside of Rome, except to a marginal extent in the Florentine church of San Miniato al Monte, where an equally large number of birds were depicted within the apse mosaic. There appear to be no symbols in the mosaics of San Marco that are similar to the Early Christian mosaics in Rome.

French influence on the architecture used in Italy from the thirteenth century onwards is evidenced by the adoption of the Gothic style, though it was adapted to Italian tastes. So, was there any French influence on the iconography of mosaics? Probably, but it was far more limited than in architectural developments. In the apse mosaic of Santa Maria Maggiore, a mosaic already discussed as bearing the influence of the Franciscans and early Christian art, the Virgin is portrayed as a regal and crowned figure, with her head erect, and richly and colourfully dressed. This personification is arguably traceable to depictions of the Virgin as a majestic figure being crowned as the Queen of Heaven that Nicholas IV saw during his time as papal legate in Paris (Plate

---

<sup>321</sup> Vicchi, *The Major Basilicas of Rome*, p. 138. The relics of the manger are in the Crypt of the Crèche.

<sup>322</sup> Marchei, *S. Maria in Trastevere*, p. 52.

12). There is a similar sculptural depiction of the Virgin above the north door of the eastern facade of the cathedral of Notre Dame, Paris that was erected in 1210, for instance.<sup>323</sup>

This majestic depiction of the Virgin, whose origins lay in France, had already been influential in Italy before the 1290s, when Nicholas IV commissioned the *Coronation of the Virgin* mosaic for Santa Maria Maggiore. The influence was on painting. Guido da Siena used a regal image of the Virgin in his fresco of the *Coronation of the Virgin* that he painted in the 1270s.<sup>324</sup> The fresco of *Christ and the Virgin enthroned in Paradise* on the wall in the church of San Francesco in Assisi in 1280 and a stained glass window created about the same time by Duccio for Siena's cathedral also show a majestic Virgin. It is possible then that the assertive Queen of Heaven portrayal in the apse mosaic at Santa Maria Maggiore may have been similarly influenced by the French personification.

What is notable is that the French-inspired image of the Virgin in the apse mosaic of Santa Maria Maggiore did not itself serve as a model for any subsequent mosaics installed in Italy. This seemingly relates to the differing ways in which the Virgin was regarded elsewhere. Outside of Rome, other versions of the crowning of the Virgin show her more simply dressed and submissively bowing her head in order to receive the crown. The mosaic on the reverse side of the Florentine cathedral's facade is just one example.<sup>325</sup> Here, she is seated separately from Christ and points towards Him as if He is the major figure. And, in the fourteenth-century facade mosaic at Orvieto cathedral, the Virgin is once again shown dressed in white, rather than in sumptuously hued garments and again inclining her head before Christ as He places the crown on her head.

---

<sup>323</sup> Philippe Verdier, 'Suger a-t-il été en France le créateur du theme iconographique du couronnement de la Vierge?', *Gesta*, Vol. 15, No. 1/2, 1976, p. 227-236. The patron was Abbot Suger and the sculptured image is said by Verdier to date to 1210.

<sup>324</sup> Gertrude Coor-Achenbach, 'The Earliest Italian Representations of the Coronation of the Virgin', *Burlington Magazine*, Vol. 99, No. 655, 1957, pp. 328-332. A fragment of Guido's painting is now in the Courtauld Institute.

<sup>325</sup> This large, interior mosaic was installed above the main exit of the building in the late thirteenth century.

Byzantine influence on the Venetian mosaics in the basilica of San Marco appears to have come in what Demus terms as several “waves” during the thirteenth century.<sup>326</sup> Migrating Greek artists who left the Byzantine Empire for Venice during its occupation by the Latins (1204 to 1261) brought with them miniature manuscripts that are thought to have influenced the iconography of Venetian mosaics, though Demus questions how significant that influence really was. By the late thirteenth century, Demus contends that only the Moses cupola exhibits any Byzantine influence, but on the style rather than the subject matter. Byzantine influence on the iconography of mosaic art elsewhere in Italy would have come only via Venetian works of art and probably been slight.

A further influence on iconography may have been the presence of icons in Italy, especially in Rome. Some were owned by churches such as Santa Maria Antiqua, Santa Maria Maggiore, and the pope’s private chapel of the Sancta Sanctorum at the Lateran.<sup>327</sup> Many of these icons were from Byzantium, filtered into Italy during and after the period of Iconoclasm, and others were Italian copies “after” Byzantine icons. They were invested with great reverence. Opulent, metal crowns were placed on images of the Virgin in icons, like the one owned by Santa Maria Antiqua. Many were kept in precious reliquary boxes and others were used as foci during huge public processions on feast days.<sup>328</sup>

Given the power of icons in the minds of people, did they have any influence on the iconography of mosaics? Gardner refers generally to the influence of icons on late thirteenth-century art work, but that influence has not been examined specifically in relation to mosaics of the period.<sup>329</sup> It remains possible though that the most sacred icons, which were generally believed to have been painted by Saint Luke from the

---

<sup>326</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, pp. 215, 217.

<sup>327</sup> Mario Cimpanari, *Sancta Sanctorum Lateranense*, Vol. 1, (Rome: 2003). The icon of the Acheropoieton, (a portrait of Christ made by a deity rather than human hands) is housed in its reliquary in the Sancta Sanctorum and can be seen as plate 8 in Cimpanari’s book.

<sup>328</sup> Ibid. p. 139 for the route map of the annual procession of the icon of the Acheropoieton on the eve of the Assumption through Rome, reproduced from the Ordines Romani XVI-XV. On the processions, see also Herbert L Kessler, and Johanna Zacharias, *Rome 1300, on the Path of the Pilgrim* (New Haven: Yale University Press, 2000).

<sup>329</sup> Julian Gardner, 'Pope Nicholas IV and the Decoration of Santa Maria Maggiore', *Zeitschrift für Kunstgeschichte*, No. 36, 1973, pp. 22, 25.

living likeness of the Virgin and whose image therefore should not be changed, may have influenced the iconography of mosaics. Did the icon of the “*salus populi romani*” owned by Santa Maria Maggiore exert some influence on the iconography of mosaics that were installed into the basilica in the late thirteenth century?<sup>330</sup> The apse mosaic in Santa Maria Maggiore with its majestically clothed Virgin bears little resemblance to its own icon with its Virgin and Child image. But possibly the late-thirteenth century mosaic in San Crisogono bears some similarities to it. In both the icon and San Crisogono mosaic, the figures of the Virgin and Child are placed before a plain golden ground, the Virgin is clothed in dark garments, the Christ Child is shown with an adult-looking face and clothed, and both Virgin and Child avert their gazes from the viewer and each other. The Christ Child also signals His blessing with the two fore-fingers of the right hand in both images, but this is not to say that the icon was the model for the mosaic. Both icon and mosaic may simply have been influenced by unchanging and contemporary ideas of how the Virgin and Child should look.

However, patrons of mosaics appear to have required the addition of more figures than are shown in icons. For example, at Santa Maria Aracoeli, the interior mosaic includes the three additional figures of Saint John the Baptist, Saint Francis and the donor. At San Crisogono, the Virgin and Child are flanked by Saints Crisogono and James, and in the lunette above the old main entrance to Santa Maria Aracoeli, the Virgin and Child are placed between two angels. The lunette mosaic at Santa Maria Aracoeli also shows evidence of subtle adjustments to the usual design. Here, the mosaicist indicates some emotional attachment between the Christ Child and His mother. He is shown looking upwards at the Virgin’s face and attempting to engage her attention, something unseen in Roman icons. Rather, the mosaic may suggest the influence of painters such as Duccio, who for instance in the *Maestà* was beginning to indicate more maternal tenderness towards the Christ Child.

---

<sup>330</sup> Hans Belting, *Likeness and Presence: A History of the Image before the Era of Art* (Chicago: University of Chicago Press, 1994), p. 72. “*Salus populi romani*” means “for the salvation of the people of Rome”. It has the alternative name of “*Regina caeli*” or “Queen of Heaven”. Gerhard Wolf gives an account of a 1988 exhibition in Rome of Byzantine icons in Maria Vassilaki (ed), *Images of the Mother of God* (Aldershot: Ashgate, 2005), p. 24.



Finally, it appears that patrons of mosaics might sometimes have chosen an iconography to deal with the political circumstances in which they found themselves. In the late thirteenth century, no pope felt secure, in part because of external threats to the papacy from the rulers of southern Italy and the Imperial court to the north of the Alps, but also from the leading Roman families vying for the papal tiara.<sup>331</sup> Faced with this fractious situation, Nicholas IV appears to have exerted a strong, determining influence on the iconography of the mosaics he commissioned in order to make visual statements about his legitimacy. Thus, in the apse mosaic Nicholas IV commissioned for Santa Maria Maggiore, he clearly requested an image of himself, but with the Virgin's hand resting upon his tiara as if in a seeming endorsement of his legitimacy to the papacy.

In the second decade of the sixteenth century, Agostino Chigi commissioned a mosaic as part of the decorative scheme for his funeral chapel in the important Roman church of Santa Maria del Popolo (Plate 13). A mosaic element was an unusual choice. Outside of Venice, it was a rare medium by the early sixteenth century. The reasons for the choice appear to relate to Chigi's association with Pope Julius II, and the pope's preferred painter, Raphael. Chigi had already been granted a monopoly of the alum works at Tolfa by Julius II, and went on to establish an international trade in the substance that was heavily in demand by wool finishers. As a wealthy man, he was able to lend vast sums of money to the papacy.<sup>332</sup> Already, Chigi's Roman home, the Villa Farnesina, had been painted by Raphael in 1513, and Chigi turned to him to design his funeral chapel.<sup>333</sup> As a model, Raphael appears to have used his own and Bramante's work in Pope Julius II's Stanza della Segnatura in the Vatican Palace. Common to both the Stanza and Chigi's funeral chapel are gilded frames in the ceiling that contain fresco in the former, and mosaic work in the funeral chapel. Raphael's

---

<sup>331</sup> Eamon Duffy, *Saints and Sinners: A History of the Popes* (New Haven: Yale University Press, 2014), p. 162. As an example of this fractious atmosphere between leading families in Rome, Nicholas IV's successor, Pope Boniface VIII was attacked at his palace in Anagni by members of the rival Colonna family and imprisoned. He died shortly afterwards.

<sup>332</sup> Richard Cocke, *Raphael* (London: Chaucer Press, 2004), p. 126. For example, to Pope Julius II's successor, Pope Leo X, Chigi lent 75,000 florins. Just before this time, it took a master builder 7 days to earn a florin. Mueller, *The Venetian Money Market*, p. 653, which assumes, as is commonly agreed, that 1 ducat equalled 1 florin.

<sup>333</sup> Elsa Gerlini, *The Villa Farnesina alla Lungara, Rome* (Rome: Istituto Poligrafico e Zecca dello Stato, 2006), pp.39-42. Raphael produced the "Triumph of Galatae" for what was once the loggia.

frescoes within the frames show the muses of Poetry, Philosophy, Theology and Justice inspired by a divine being and seated on billowing clouds, with an illusionary gold mosaic sky, possibly to suggest the divine connection.<sup>334</sup> But, instead of illusionary mosaic work, Raphael used real mosaic work. The key piece in the chapel's design is the mosaic image of God set high in the dome within a gilded circular frame. This image is far removed from the standard, immediately recognisable images of Christ in the late thirteenth-century mosaics referred to, for instance, in the basilica of San Miniato al Monte, the Pisan cathedral, and at San Frediano in Lucca. Here, in Chigi's chapel, He is presented as a vigorous Creator of the Universe. His voluminous garments billow around His lower limbs whilst His upper limbs are energetically raised, causing His sleeves to tumble back to His elbows. This appears to be a unique portrayal of a powerfully active deity who appears more human than god-like. So not only does this mosaic provide a good example of the way in which mosaic art had changed, albeit in the hands of one artist, but also how innovative it was, because it bears little resemblance to what his fellow patrons were commissioning. In the early sixteenth century, patrons of artistic work commonly chose paint and events from the lives of the saints. For instance, in a chapel near to Chigi's funeral chapel, Pinturicchio and Tiberio d'Assisi were commissioned to paint the walls with scenes showing events from the life of the Saint Jerome.<sup>335</sup>

## Conclusion

After the period between 1270 and 1329, the iconography of mosaics changed away from monumental figures of Christ and the Virgin, towards smaller images of local saints, prophets and foliage designs. This seemed a consequence of the virtual disappearance of apses as potential sites for new mosaic decoration as Gothic architecture, or a modification of it became the preferred style, and the older Romanesque buildings ran out of spare space for mosaic decoration. The areas

---

<sup>334</sup> For illustrations, see Cocke, *Raphael*, pp. 64,65. See also, Paul Taylor, "Julius and the Stanza della Segnatura" in *Journal of the Warburg and Courtauld Institutes*, Vol. 72, (2009), pp. 103-141 where he reads into the titles of the frescoes such as, "Numine afflatur", ("she is inspired by divine power") that God is a great force.

<sup>335</sup> Gioia Mori, "The Fifteenth Century: The Early Renaissance", in *Rome: Art and Architecture*, ed. by Alessandro Tomei (Cologne: Konemann, 1999), p. 392.

devoted to stained glass windows in the Gothic buildings thus deprived patrons of suitably large surfaces to decorate with mosaics and additionally, “tastes” seem to have changed. The facades of Venetian churches that were decorated with red brick and white stone illustrate this changed taste, as do the plain grey marble exteriors and interiors of many churches in Florence and the cathedral at Pienza, for example. Patrons who wished to commission mosaic were therefore mostly obliged to utilise much smaller architectural positions in older Romanesque buildings. The limited space afforded by lunettes over doorways for example, constrained the iconography of mosaic art. These smaller mosaics tended to avoid images of the more central figures of the Christian faith and to omit the contextual or symbolic detail that is so evident in the monumental mosaics of the late- thirteenth century.

## Chapter 5

### Why did patrons choose mosaic art?

Whilst there was an overall decline in the demand for mosaic art between 1270 and 1529, the art form never entirely died out in Italy. There were periods between 1270 and 1529 when mosaic art was vigorously practised, especially in Rome at the end of the thirteenth century.<sup>336</sup> But beyond Rome, mosaic art was also practised in Florence, as long-standing mosaic programmes continued in the Baptistery, and in Venice at the basilica of San Marco. Elsewhere in Italy around the end of the thirteenth century or beginning of the fourteenth century, mosaic was used to decorate buildings as far apart as Amalfi, Arezzo, Lucca, Naples, Pisa and Salerno. Thereafter, mosaic decoration continued to be used until at least 1529, albeit intermittently, in the Venetian basilica of San Marco. Mosaic decoration was also used in Orvieto in the mid-fourteenth century and in the mid-fifteenth century in Rome at the church of Santa Croce, when the mosaics on the walls and ceiling of the Chapel of Santa Helena were renewed. As late as 1516, Agostino Chigi chose to include mosaics in the lavish decorative scheme for his funeral chapel in Santa Maria del Popolo in Rome. This chapter discusses the difficult question of why patrons may have continued to commission mosaics more or less throughout the period 1270 to 1529.

In the absence of surviving contemporary documents, the discussion is framed around the broad political, economic, social, religious and cultural changes that occurred in Italy between the Middle Ages and the Renaissance. Political tensions in Italy around 1300 may have led to some popes and cardinals of the Church and the Venetian doges to use mosaic art for propaganda reasons, perhaps in order to stabilise or strengthen the power of their office. Some individual patrons may have used mosaic art to attain more power or to glorify themselves. Other patrons possibly used mosaic art as a means of rivalling the reputations of other families or eclipsing the achievements of patrons in other cities. The discussion also considers other possible reasons, including

---

<sup>336</sup> Oakeshott, *The Mosaics of Rome*. Oakeshott used the word “Renaissance” in the title of Chapter VII, “The Roman Renaissance as expressed in Mosaics”.

whether some patrons appear to have chosen mosaic art because it was an expensive medium and its purchase could confer honour and status in an age when lavish spending was admired.<sup>337</sup> The discussion also extends to whether some patrons may have been influenced by Italy's cultural inheritance. In practice, it seems likely that there was no single reason why patrons commissioned mosaic art between 1270 and 1529, but rather a complicated combination of contributory factors that relate to patrons living in a specific city, at a specific time.

So, who were the patrons of mosaic art between 1270 and 1529? It is often not known who placed commissions for mosaic decorations, and who paid for them. Those patrons that we know of fall into four groups: committees of one sort or another; men of the Church; kings; and laymen. In some cases, it would seem that committees of anonymous men responsible for the fabric and upkeep of a church building placed commissions for mosaic decoration. At the Baptistery of San Giovanni in Florence and the church of San Miniato al Monte, a committee of men belonging to the Calimala guild bore this responsibility and are known to have commissioned mosaic art. At the basilica of San Marco in Venice, a small committee of procurators assumed this function, and at the cathedrals of Orvieto and Pisa, it is likely that committees associated with each *opera del duomo* commissioned their mosaic decoration.

In a few other cases, men of the church were patrons of mosaic art. Between the last quarter of the thirteenth century and the first quarter of the fourteenth century, we have records of three popes commissioning mosaic art in Rome, Pope Nicholas III, (1277 - 1280), Pope Nicholas IV, (1288 - 1292), and Pope John XXII, (1316 - 1334). We also know that in the same period, four men, Cardinal Giovanni Borgia and Archbishop Gardona in Sicily, and Cardinal Giacomo Stefaneschi and his brother, Bertoldo Stefaneschi in Rome commissioned mosaics. Only one king, Robert of Naples, (1309-1343), may possibly have commissioned a mosaic for the city's cathedral. Finally, just two laymen are recorded as patrons of mosaic. Giovanni da Procida commissioned an apse mosaic for the cathedral in Salerno in the second half of the thirteenth century,

---

<sup>337</sup> O'Malley, *The Business of Art, Contracts and the Commissioning Process in Renaissance Italy*, p. 148.

and Agostino Chigi who commissioned the mosaic for his funeral chapel in Santa Maria del Popolo in Rome in the early-sixteenth century.

As I discussed in Chapter 2, mosaics were likely to have been an expensive form of decoration. All the patrons therefore needed access to huge funds. Pope John XXII arranged for 1,000 florins from church funds to be allocated to the project to decorate the facade of San Paolo fuori le Mura with mosaic and in a papal bull of 1325, he declared that all offerings at the High Altar for the next five years should be allocated to the same project.<sup>338</sup> Other popes and cardinals who commissioned mosaics had family fortunes to draw upon. Pope Nicholas III belonged to the wealthy Orsini family and so did Cardinal Giacomo Stephaneschi and his brother, Bertoldo, patrons respectively of the *Navicella* mosaic in San Pietro and the *Life of the Virgin* at Santa Maria in Trastevere. Pope Nicholas IV, patron of several large mosaic projects in Rome at Santa Maria Maggiore and San Giovanni in Laterano, was sponsored by the wealthy Colonna family and one member, Cardinal Giacomo Colonna, became joint patron of the apse mosaic in Santa Maria Maggiore.<sup>339</sup>

In Venice, mosaic decoration in San Marco was ascribed to the doges, some of whom, like Andrea Dandolo, had once been a procurator. From 1343 onwards, Doge Andrea Dandolo was able to replace fresco decoration in the Baptistry with prestigious mosaics and to build the new chapel of San Isidore. Dandolo had its vault and walls extensively covered with mosaics. Little appears to have been written about the state of San Marco's finances but the wealth at Dandolo's disposal would have arisen from San Marco's three functions as a private ducal-church, parochial-church and state-church.<sup>340</sup> Ultimately though, San Marco's funds must have derived from Venetian wealth following her aggressive expansion onto the mainland after 1339 and recovering overseas trade.<sup>341</sup> Suggestions that Dandolo partially funded the mosaic

---

<sup>338</sup> The annual income of the papacy from all sources in the 1320s was around two hundred thousand florins. Peter Spufford, *Money and its use in Medieval Europe* (Cambridge: Cambridge University Press, 1988), p. 228. For a discussion of the facade mosaic, see Gardner, 'Copies of Roman Mosaics in Edinburgh', p. 587.

<sup>339</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304*, p. 24, where he suggests that Giacomo Colonna part-funded the mosaic work at Santa Maria Maggiore.

<sup>340</sup> Demus, *The Mosaics of San Marco in Venice*, Vol. 2 (text), p. 54.

<sup>341</sup> Debra Pincus, "Venice and Its Doge in the Grand Design: Andrea Dandolo and the Fourteenth-Century Mosaics of the Baptistry", in *San Marco, Byzantium, and the Myths of Venice*, ed by Henry Maguire and

decoration of the Baptistery indicate that like Nicholas III and Cardinal Stefaneschi, he also had access to family wealth.<sup>342</sup>

In Florence, the patron of the Baptistery mosaics was a wealthy guild. From the early-thirteenth century, the Florentine guild of the Calimala bore responsibility for the building and fabric of the Baptistery of San Giovanni and funded on-going mosaic decoration during the thirteenth century until its interior was covered with mosaic work by the early- fourteenth century. The Calimala guild represented the interests of tradesmen who were engaged with the finishing of foreign woollen goods and it was reputedly the wealthiest guild in Florence.<sup>343</sup> Its annual business solely in Florence in 1338 extended to 300 hundred thousand gold florins and its reputation was so high that the Calimala had the presumably lucrative right to be the sole provider of red robes for all the cardinals of the Church.<sup>344</sup> There were twenty-two guilds in Florence around 1300, and it is only the two wealthiest, the Calimala and Lana guilds, for whom there is any evidence of the patronage of mosaic art.<sup>345</sup>

It was almost unknown for individuals who were laymen to commission mosaic art. There are only two known examples from the period 1270 to 1529. Giovanni da Procida is an obscure patron, but more is known about Agostino Chigi. He was the banker to the papal court, personal friend to Pope Julius II (1503 - 1513), and reputedly the wealthiest man in Rome in the early sixteenth century when he commissioned mosaics as part of the decoration for his own funeral chapel in Santa Maria del Popolo. It is almost certain that he funded the entire project himself.<sup>346</sup>

---

Robert S. Nelson (Washington: Dumbarton Oaks Publications, 2010), p. 247. Procurators were responsible for the material fabric of the building. There would not appear to be any records of mosaic programmes being left in abeyance for want of funding.

<sup>342</sup> Patricia Fortini Brown, *Venice and Antiquity, the Venetian Sense of the Past* (New Haven: Yale University Press, 1996), p. 42.

<sup>343</sup> Brucker, *Renaissance Florence*, p. 23, where the Calimala is described also as the “most aristocratic of guilds”, equating with the city’s old mercantile elite.

<sup>344</sup> For a monetary comparison, the sum of 300 thousand florins was approximately one sixth of the annual cost of Florence’s war between 1375 and 1378. Gino Luzzatto, *An Economic History of Italy from the Fall of the Roman Empire to the Beginning of the Sixteenth Century* (London: Routledge, 2006), p. 122. See also Edgcumbe, *The Guilds of Florence*, p. 127.

<sup>345</sup> The Lana guild represented woollen workers.

<sup>346</sup> Gerlini, *La Villa Farnesina alla Lungara*, p. 3 and Rowland, 'Render unto Caesar the things which are Caesar's: Humanism and the Arts in the patronage of Agostino Chigi', p. 676 for the wealth of Agostino Chigi.

So why did wealthy patrons such as popes, cardinals, the Calimala and Lana guilds, the procurators of San Marco, and Chigi choose to commission mosaic-work? Whilst there were probably very specific reasons for individual commissions being placed, it is possible to treat them as general issues.

Institutions facing fractious internal divisions and challenges from outside may be expected to seek ways of stabilising themselves and strengthen their political influence. In Rome, the western Church in the second half of the thirteenth century was weak and indecisive. It faced long vacancies between popes, a rapid turnover of papal incumbents and the divisive effects of an influx of French cardinals.<sup>347</sup> External challenges came from the French Angevin rulers of Sicily and southern Italy, and the Imperial family of the Hohenstaufen. Both sought to wrest control from the papal court and dominate and rule the western centre of Christianity.<sup>348</sup> The use of mosaic art by late thirteenth-century popes could therefore be seen as attempts to stabilise or enhance the status and power of the western Church in the eyes of its challengers and supporters. One pope's patronage of mosaic for this purpose may have resulted from his service in Constantinople. Nicholas IV had been a member of a papal mission to negotiate the Union of the Eastern and Western Churches in 1274.<sup>349</sup> Although there appear to be no contemporary documents to substantiate the claim, it is thought that Nicholas IV's, "prolonged contact with the art of Constantinople was never to desert him", and that his patronage of mosaic in Rome could partly have resulted from his service in the eastern centre of Christianity and familiarity with the medium.<sup>350</sup>

Nicholas IV may have made attempts to promote the Church's authority in several ways, by making evident its access to great wealth and ability to finance mosaic art, and then by emphasising the Church's long links with Rome's pre-eminent Christian history and early Roman emperors. This motive is suggested by the iconographical similarities between the early Christian mosaics in Santa Costanza, the mausoleum of the daughter of the first Christian Emperor, Constantine the Great, and the late-

---

<sup>347</sup> Duffy, *Saints and Sinners: A History of the Popes*, p. 158.

<sup>348</sup> Paul Hetherington, 'Pietro Cavallini, Artistic Style and Patronage in late Medieval Rome', *The Burlington Magazine*, Vol. 114, No. 826, 1972, p. 7.

<sup>349</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198 - 1304*, p. 23.

<sup>350</sup> *Ibid.* p. 23.



thirteenth century mosaics that Nicholas IV commissioned for the Roman cathedral of San Giovanni in Laterano and the major basilica of Santa Maria Maggiore.<sup>351</sup> The image of Christ in the facade mosaic of San Giovanni in Laterano bears a close connection to the portrayal of the blessing Christ in the fourth-century mosaics at the mausoleum and the vines in the apse mosaic at Santa Maria Maggiore also echo those at Santa Costanza. These similarities would have been evident to Romans of the late thirteenth century because the mausoleum had been converted to a church in the early Middle Ages.<sup>352</sup>

There are several further indications that Nicholas IV wished to align and emphasise the Church's connection with Rome's early Christian heritage and thereby strengthen the position of the late-thirteenth century church in Italy and make sure that it stayed in control of western Christendom. His own personal experiences as cardinal-priest of Santa Pudenziana from 1278 onwards may have been cathartic. He would have been particularly aware of the fourth-century mosaics in Santa Pudenziana and it is perhaps no co-incidence that the placement of Christ on an elaborately decorated throne in the apse mosaic in the nearby church of Santa Maria Maggiore nearly a thousand years later resembles His portrayal in Santa Pudenziana. There are also connections between the fourth-century mosaics at Santa Pudenziana and those of the late-thirteenth century at San Giovanni in Laterano, also commissioned by Nicholas IV. The mosaics in both churches show skies streaked with horizontal clouds and crosses empty of the crucified Christ.

Furthermore, it is possible that Nicholas IV sought to make the connection between the early Christian Church of Rome and the church even more explicit by having sections of early mosaic work integrated into new mosaics he commissioned just before 1300. Gardner has suggested, for example, that parts of the original fourth-century mosaic in San Giovanni in Laterano were preserved from destruction and inserted into the new apse mosaic.<sup>353</sup>

---

<sup>351</sup> Brandenburg, *Ancient Churches of Rome from the Fourth to the Seventh Century - The Dawn of Christian Architecture in the West*, p.2. The facade mosaic at San Giovanni in Laterano no longer exists but is shown in Giotto's fresco at the church of San Francesco, Pisa.

<sup>352</sup> Ibid. p. 2.

<sup>353</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304*, p. 257.

In Venice, it would appear that Doge Andrea Dandolo may also have commissioned mosaic work in order to stabilise and strengthen the power of his office. Dandolo assumed office in 1343. Earlier fourteenth-century doges had struggled to retain mastery of the city and control of the Adriatic and Mediterranean Seas. They had witnessed food shortages and monetary collapse at home, an assassination attempt on the life of Doge Pietro Gradenigo, floods and earthquakes, and maritime challenges from Genoa, Ancona and Zara on the Dalmatian coast.<sup>354</sup> In the early years of his dogate, Dandolo commissioned the complete replacement of the fresco decoration in the Baptistery of San Marco with mosaic and this change to a more opulent and prestigious medium may have reflected the doge's intention to impress both Venetians and foreigners with the vision, determination and power of his office.

In reality, the Venetian's supremacy of the seas remained under threat during Dandolo's dogate, yet the mosaic that he had installed in the Baptistery cupola suggests not only the power of the Venetian fleet, but Christ's endorsement of that power. The mosaic shows Christ charging the apostles to take His word to the peoples of the world, but in Christ's hand is the flag of the Venetian fleet held aloft above His halo, as if to suggest that the ships of Venice ruled supreme over the seas (Plate 14). Furthermore, the destinations of the apostles, as clearly defined by the exotic garments of the baptis mal candidates and the architecture of the accompanying buildings, is said to match the trading empire built up by the Venetians and the following analogy could thus be drawn: just as Christ had conquered the world with His message, so Venice had conquered the world with her fleet and trade.

One further use of mosaic for wider political effect can be seen in the chapel of San Isidore in the basilica of San Marco. Dandolo built this new chapel and decorated its vault and walls extensively with mosaic scenes relating to San Isidore's life. The choice of saint and the internment of his bodily remains in the chapel were significant. Isidore was a military saint and the lively, visual narrative shows him as a mixture of military might, capable of winning battles, but also having divine powers, able to exorcise the

---

<sup>354</sup> Debra Pincus, 'Hard Times and Ducal Radiance' in *Venice Reconsidered, the History and Civilisation of an Italian City-State, 1297-1797*, ed by John Martin and Dennis Romano (Baltimore: The John Hopkins University Press, 2000), p. 90.

devil and baptise. Dandolo possibly intended that Isidore's protective military skills and divine powers would make Venice seem inviolate to any other city or nation intent on challenging her. Dandolo's choice of mosaic art for the Baptistery and Chapel of San Isidore and their iconography seem to show that Dandolo was a particularly active practitioner of the skill of using art for political purposes. And to give the underlying propaganda maximum exposure to citizens and foreigners, Dandolo and Nicholas IV chose to install the mosaics in public, sacred spaces that were regularly visited, rather than in their private palaces.

It is not easy to distinguish between an official's intention to bolster the power of his office or institution, and his desire to glorify himself. But both Nicholas IV and Dandolo may have attempted to memorialise their names by trying to invest themselves with divine approval.<sup>355</sup> Nicholas IV arranged for the Virgin's hand to rest on his papal tiara in his image in the apse mosaic at San Giovanni in Laterano, thus possibly gesturing her approbation of him as a person, although this could also be interpreted as approval for his papal office. The crucifixion mosaic in the Venetian Baptistery could similarly show divine approval for Dandolo's personage, or alternatively his office. In the mosaic, the doge and two other city officials are clothed in the red ceremonial dress that indicated their high status in Venice, whilst the mosaic in the vault overhead shows Christ sending forth His blessings on the rulers of Venice below.<sup>356</sup> But the notion that this mosaic was intended to glorify his own personage is suggested by Dandolo arranging for his own figure to be nearest to the cross, thereby usurping the Virgin's usual privileged position. Dandolo's other actions suggest that he intended to exalt himself. He placed the images of himself and Saint Mark jointly holding a Paschal candle on the Venetian coinage, which can now be seen in the Correr Museum, Venice (Plate 15). He also arranged to be interred in the Baptistery that he had redecorated with mosaics. It

---

<sup>355</sup> Pincus, 'Hard Times and Ducal Radiance' p. 94 and p. 102 for the quotation from Doge Enrico Dandolo's (1192-1205) *Chronica de Venexia*, "And God through his mercy and divine grace illuminates the mind of each doge". The idea of attempting to invest the doge with sanctity was therefore not new.

<sup>356</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The History, The Lighting*, p. 180. The three figures are the doge, the Grand Chancellor of Venice, Rafaino Ceresini, and an anonymous figure, possibly the Procurator of the basilica of San Marco. Brown, *Venice and Antiquity, the Venetian Sense of the Past*, p. 43 refers to this third person as "Procurator" of San Marco, that is, the person responsible for the building and its fabric. See also Martin, *Venice Reconsidered, the History and Civilisation of an Italian City-State, 1297-1797*, p. 111.

is probably significant that the burial of future doges anywhere in San Marco was subsequently forbidden. This decision perhaps suggests that at least some contemporaries considered that Dandolo was overly concerned with his own honour.

A patron who may also have used mosaic art to enhance his own honour and status is the layman and banker to Pope Julius II (1503 - 1513). Agostino Chigi was said to have been the richest man in Rome between 1500 and 1520 and renowned for the lavish expenditure that, in the Renaissance, was associated with ideas of “magnificence” and high status.<sup>357</sup> Cardinal Fabio, for instance, remarked on a grand banquet thrown by Chigi in 1518 at his residence sited alongside the River Tiber, when after each course, the silver and gold serving dishes were thrown into the river.<sup>358</sup> That Chigi was concerned with his status in Rome may further be construed from his actions around the time of his marriage. For his bedchamber, he commissioned fresco scenes of the marriage of Alexander the Great, thereby suggesting his link with a famous character from the past and that his chosen painter, Sodoma, was the equal of Apelles, Alexander’s renowned painter. Chigi’s decorative commissions at his funeral chapel at Santa Maria del Popolo in the early sixteenth century may further illustrate his ideas of grandeur and desire for status. The chapel was modelled on the ancient Pantheon and mosaic was incorporated into the decorative design drawn up by Raphael, Julius II’s favourite painter. By this time, mosaic was rarely used except in Venice, probably because of the difficulties acquiring tesserae, artists who were able to install them, and the cost of the medium. The completed funeral chapel may therefore have been intended to display Chigi’s ability to spend lavishly, an ability that according to the mores of the time, may have credited him with high ranking in Roman society.<sup>359</sup>

Lorenzo de’ Medici may have been another patron motivated by a personal imperative to confirm his high status, and his initial plan in the 1490’s to use mosaic to decorate

---

<sup>357</sup> O'Malley, *The Business of Art, Contracts and the Commissioning Process in Renaissance Italy*, p. 148. That lavish spending displayed stature was deeply embedded in fourteenth, fifteenth and sixteenth century society.

<sup>358</sup> Gerlini, *La Villa Farnesina alla Lungara*, p. 5. However, according to Cardinal Fabio, previously placed nets in the river allowed Chigi to have his dishes retrieved. This extravagant act is also recorded in Rembrandt Duits, “Art, class and wealth” in *Viewing Renaissance Art* ed. Kim W. Woods, Carol M. Richardson and Angeliki Lymberopoulou (New Haven: Yale University Press, 2007), p. 21.

<sup>359</sup> Chigi was subsequently accorded the right to use Julius II’s symbol of intertwined acorns and to be present at the pope’s death-bed.

the chapel of San Zenobius in the cathedral of Florence would have been remarkable and memorable had it been successful.<sup>360</sup> Lorenzo's support for what may have been perceived generally as an "out-dated" decorative medium by the late-fifteenth century, and which ran counter to trends in Renaissance art and to the vehement preaching of Savonarola against ornate, expensive art, possibly relates to his desire to make the Florentine cathedral into "the Pantheon of Florence" and thereby, immortalise his name.<sup>361</sup>

In contrast, no one specific person used mosaic art in the Florentine Baptistery of San Giovanni to promote their own personage. As shown earlier, the Calimala guild may have been wealthy and some of its members may have been powerful members of the city's ruling elite, but there are no images of laymen or churchmen in any of the mosaics in the Baptistery of San Giovanni. It would thus appear that in Florence, mosaic art was not used, as it was in Rome and Venice, to invest any official with power or sanctity. In part, this may have been allied to the fact that Florence and those who ruled the city, experienced fewer significant political and economic challenges than those in Rome and Venice. Although it is true that feuds between leading families and rivalry with other Tuscan cities was a feature of Florentine history, the city remained relatively stable, prosperous and expanding between the end of the thirteenth century and the outbreak of the Black Death in 1348. There was, it would seem, less need to use mosaic art for either individual or political purposes in Florence, although the city did engage in artistic rivalry with other cities, as will be seen later.

Rivalry between individuals in the leading families in Rome in the late- thirteenth century may also have accounted for the patronage of mosaics. The basis of this

---

<sup>360</sup> Richard Stapleford (ed), *Lorenzo de' Medici at Home, the Inventory of the Palazzo Medici in 1492* (Pennsylvania: The Pennsylvania State University Press, 2013), p. 1, where Stapleford quotes the contemporary diarist Luca Landucci describing Lorenzo as "the most illustrious, the richest...amongst men". The project failed because of Lorenzo's premature death in 1492 and lack of support from the cathedral's Opera thereafter. See also F.W. Kent, *Lorenzo de' Medici* (Baltimore: The John Hopkins University Press, 2004), p. 96, where he points to Lorenzo's need to exercise "subtle reticence" and not flaunt his wealth and position for fear of being deposed. This fear became a reality in 1494 when his son Piero was exiled, followed by the creation of a republic with an elected leader.

<sup>361</sup> Judith Hook, *Lorenzo de' Medici* (London: Hamish Hamilton, 1984), p. 124. However, the Roman Pantheon is not known to have contained mosaic decoration. The phrase was used by a contemporary, Benedetto Maiano. Lorenzo had a collection of miniature mosaic icons. See Rembrandt Duits, "Byzantine Icons in the Medici Collection", *Byzantine Art and Renaissance Europe*, eds Angeliki Lymberopoulou and Rembrandt Duits.

conjecture is the bitter rivalry between the Orsini and Colonna families. Pope Nicholas III (Giovanni Gaetano Orsini, 1277 - 1280) probably used a series of painted papal portraits in the church of San Paolo fuori le Mura to assert his place as an inheritor of the role of the apostles. A decade later, Pope Nicholas IV (1288 - 1292) commissioned the more prestigious medium of mosaic at San Giovanni in Laterano and Santa Maria Maggiore, some of the oldest churches of Rome and aligned to the Colonna family who supported Nicholas IV's elevation to the papacy. It is suggested that Nicholas IV's decorative programmes in these two churches, wherein he featured himself alongside the apostles, was perhaps a riposte to the Orsini family of Nicholas III.<sup>362</sup> Furthermore, the rivalry between the Colonna and Orsini families in all likelihood caused Nicholas IV to ignore the basilica of San Pietro in his mosaic commissioning. The building was in the care of the rival Orsini family. Perhaps as a counter riposte, a member of the Orsini family, Cardinal Giacomo Stefaneschi, commissioned around 1300 a mosaic for the basilica of San Pietro. This had a very different iconography to the mosaics produced for Nicholas IV at San Giovanni in Laterano and Santa Maria Maggiore. It is possible that this was a case of the Orsini now attempting to outshine the Colonna and the pope with the *Navicella* mosaic, showing Christ, rather than Nicholas IV, saving the western Church.

Rivalry between individuals and families in Venice did not result in commissions for mosaic work since control of the decoration of the basilica of San Marco lay in the hands of the procurators. Between 1270 and 1529, no other churches in Venice appear to have been decorated with mosaic, apart from the small amount of mosaic installed into the church of San Salvatore in the early sixteenth century.<sup>363</sup> In Florence, the situation was similar with rival families in the late thirteenth century excluded from commissioning mosaics because ecclesiastical buildings and their fabric were under the control of guilds. The Baptistery of San Giovanni and the church of San Miniato al Monte were under the care of the Calimala guild, whilst the only other building with very small lunette mosaics was the cathedral, in the care of the Lana, or woollen guild.

---

<sup>362</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198- 1304*, p. 23.

<sup>363</sup> Manfredo Tafuri, *Venice and the Renaissance*, trans. by Jessica Levine (Cambridge, Massachusetts: Massachusetts Institute of Technology, 1989), p. 27. This mosaic is in the left-hand apse.

Although there may have been some artistic rivalry between the guilds, and the Calimala's symbol of the golden eagle topping the mosaic facade of San Miniato al Monte may be evidence of that, there is no evidence to the effect that mosaics were installed in Florence primarily as a result of that rivalry.<sup>364</sup>

Rivalry between Italian cities during the late Middle Ages and Renaissance was common, often intense, and sometimes erupted into warfare. Often, the rivalry between these autonomous cities, unimpeded by any sense of nationhood, emanated from attempts to become more prosperous at another city's expense by expanding their territories.<sup>365</sup> This scenario of intense rivalry between cities may offer a further explanation for the patronage of mosaics, especially during the earlier part of the period between 1270 and 1529. During the course of the thirteenth century, the interior walls and ceiling of the Florentine Baptistery were entirely decorated with mosaic, and this is notable in a city that was seemingly without a heritage of mosaic art. Around this time, other cities such as Siena were using fresco or sculpture in their baptisteries.<sup>366</sup> Apart from flaunting wealth, it is possible that the Florentine Baptistery was meant to outshine the early Christian mosaic decoration of the Roman Baptistery in Laterano, and perhaps also the Baptistery in Naples.<sup>367</sup> In Florence, contemporary writers compared the city favourably with Rome throughout the thirteenth to sixteenth centuries. The poet, Frate Guittone d'Arezzo in the 1260s likened Florence to a "new Rome" and the Florentine chronicler Giovanni Villani conferred the title of "daughter and creature of Rome" on Florence.<sup>368</sup> Florentine individuals were likened to emperors. Lorenzo de' Medici was described as "Caesar" by leading citizens and in 1502, the Republican Gonfaloniere, Piero Soderini, was given the image of a "Caesar

---

<sup>364</sup> Janet Robson, "Florence before the Black Death", in *Artistic Centers of the Italian Renaissance, Florence*, ed by Francis Ames-Lewis (New York: Cambridge University Press, 2012), p. 72, where, however, Robson says that inter-guild rivalry was a feature of Florentine life. She refers to the relief sculptures on the Campanile that were commissioned by the Wool guild, possibly as an attempt to out-shine the Calimala's bronze doors on the Baptistery (1329).

<sup>365</sup> Najemy, *Italy in the Age of the Renaissance, 1300-1550*, p. 3.

<sup>366</sup> Enzo Carli, *Siena Cathedral and the Cathedral Museum* (Florence: Scala, 1999), p. 73. The Baptistery was completed around 1325 with both fresco and sculptural decoration.

<sup>367</sup> Richard A. Goldthwaite, *Banks, Palaces and Entrepreneurs in Renaissance Florence* (Aldershot: Variorum, 1995), p. 16. Knowledge of the southern Baptistery may have resulted from the fact that several Florentine banking firms had branches in Naples. Bankers would have had connections with the Calimala Guild who commissioned the mosaic decoration of the Florentine Baptistery.

<sup>368</sup> Borsook, *The Companion Guide to Florence*, p. 16.

Augustus” who would remake Florence in marble.<sup>369</sup> In part, this echoes the Florentine boast that their city was established by Caesar, populated by the “cream” of Roman society and that the Baptistery of San Giovanni was originally a Roman temple to Mars, views that well illustrate the Florentines’ competitive nature and which, in all likelihood, could have resulted in artistic rivalry.<sup>370</sup>

Florence’s most intense rivalry in the fourteenth century, however, was with Pisa. It rested on both economic and political factors. Florence required access to the sea to expedite her lucrative trade in woollen goods and she supported the Guelf cause, thereby backing the French Angevin rulers of southern Italy who by this time were in coalition with the papal court. Pisa in turn sought to block Florentine trade and supported the Imperial cause of the Ghibellines, thereby preventing the Guelf’s complete control of Tuscany.<sup>371</sup> It is possible that in such an atmosphere of intense rivalry, cities used mosaic art as a means of gaining superiority. An analysis of certain dates suggests that this was possible. The dates of the large facade and apse mosaics at the Florentine church of San Miniato al Monte are not certain, but the apse mosaic appears to pre-date the year of 1300 and to have been installed by the mosaicist, Francesco da Pisa. Around 1300, the apse at the cathedral of Pisa either bore no decoration, fresco or damaged mosaic work but in 1301, Francesco da Pisa, aided by a team of assistants, began work on a mosaic portrayal of Christ for the cathedral’s apse. Cimabue was engaged the following year to produce the accompanying figure of Saint John the Evangelist in mosaic.<sup>372</sup> The timings of the two apse mosaics suggest that Francesco may have been recalled from Florence to Pisa to produce an equivalent or better mosaic than he had produced for the church of San Miniato al Monte in Florence.

Rivalry between Venice and Florence provides another possible reason for the installation of mosaic. It has been suggested that Dandolo’s conversion of the Venetian

---

<sup>369</sup> Kent, *Lorenzo de’ Medici*, p. 81 and Jill Burke, “Republican Florence and the Arts, 1494-1513”, in *Artistic Centers of the Italian Renaissance, Florence*, ed by Francis Ames-Lewis, p. 263.

<sup>370</sup> It was a mistaken belief that the Baptistery had once been a Roman temple.

<sup>371</sup> George Holmes, *Florence, Rome and the Origins of the Renaissance* (Oxford: Clarendon Press, 1986), p. 23.

<sup>372</sup> Malafarina, *Il Duomo di Pisa*, p. 140-142.



Baptistery from fresco to mosaic decoration in the 1340s may have been prompted by the mosaics in the Florentine Baptistery that were completed some thirty years previously, and where Venetian mosaicists are known to have worked.<sup>373</sup> However, Dandolo faced a greater challenge than those who chose the decoration of baptisteries elsewhere. The Venetian Baptistery was not a separate, impressive building like those in Florence, Rome, Naples and Ravenna, but attached to the basilica of San Marco. It was also not as large. The Venetian Baptistery therefore needed to compensate, to impress, to evoke a heavenly space and an emotional response from congregations. The resulting decorative scheme in mosaic sought to fulfil those requirements, and did so partly by drawing on eastern, Byzantine styles for the figures in the crucifixion scene.<sup>374</sup> So perhaps there were two intentions: to compete with the Florentine's Baptistery but also to underline Venetian claims to be the inheritor of the eastern centre of Christianity, especially after the weakening of the Byzantine Empire from 1204 onwards when the doges were no longer represented with a lower status than the Byzantine emperors.<sup>375</sup>

There is a further possible example of the use of mosaic art to challenge other cities. The presence of Saint Mark in the Venetian mosaic of the crucifixion in the Baptistery may have been used in this way. He is not usually shown at the cross but Saint Mark was a close associate of Saint Peter, who is not shown in the crucifixion scene. Saint Mark's presence in the Venetian crucifixion mosaic could therefore be interpreted as offering a challenge to Rome and the basilica of San Pietro in particular. If taken in association with Dandolo's other actions, including the remodelling of the Pala d'Oro

---

<sup>373</sup> Brown, *Venice and Antiquity, the Venetian Sense of the Past*, p. 42. See also Ettore Vio (ed), *St. Mark's, The Art and Architecture of Church and State in Venice* (New York: Riverside Book Company, Inc., 2003), p. 246 and Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The History, The Lighting*.

<sup>374</sup> However, it seems that in other spheres, the Venetians sought by this date to minimise Byzantine influence. For example, this can be seen in Dandolo's decision to replace an image of a Byzantine emperor wearing a halo in the Pala d'Oro with that of a doge, his subordinated status removed and invested with a halo.

<sup>375</sup> Mary Cunningham, *Faith in the Byzantine World* (Oxford: Lion Publishing, 2002), p. 182. After the sack of Constantinople in 1204 in which the Venetians played a major role, and until 1261, the Latins ruled the Byzantine Empire. It remained threatened by external forces and finally fell to the Ottomans in 1453. See also, Henry Maguire, "Signs and symbols of your always victorious reign" in *Images of the Byzantine World. Visions, Messages and Meanings*, ed. Angeliki Lymberopoulou (Farnham: Ashgate, 2011).

which was possibly intended to outshine Stefaneschi's altarpiece in San Pietro, the cumulative effect may have made the Venetian rivalry only too apparent to the Romans. The use of mosaic in all of these cities to achieve political advantage over rival cities was not unique. Buildings, sculpture, painting and tapestries were all used at times by individual cities to proclaim their wealth, power, status and culture in the highly competitive atmosphere of late medieval and early Renaissance Italy.

Although there appear to be examples of artistic competition initiated by Florence, Pisa and Venice that resulted in the patronage of mosaic in the fourteenth and fifteenth centuries, there seems to be little or no evidence that Rome either initiated or participated in this form of artistic rivalry, at least in the late-thirteenth and fourteenth centuries.<sup>376</sup> Circumstances such as the fractious political circumstances in Rome, followed by the transference of the papal court to France in 1304 and the subsequent economic and artistic decline of the city, suggest that artistic rivalry initiated by Rome was negligible or unlikely.<sup>377</sup>

It is possible to see competition between individual churches as a reason for the patronage of mosaic art. In the years prior to the holy Jubilee year of 1300, several of the major Roman churches installed mosaics, including Santa Maria Maggiore, Santa Maria Aracoeli, Santa Maria in Trastevere, San Giovanni in Laterano and San Pietro.<sup>378</sup> Possibly this was prompted by the expectation of thousands of pilgrims visiting Rome to celebrate the city's one thousand years as a Christian capital and the start of a new millennium.<sup>379</sup> The eyewitness chronicler, Giovanni Villani, reported that there were two hundred thousand pilgrims a day entering Rome seeking to buy indulgences from the churches, join processions, pray and view the many sacred relics and icons held in these churches.<sup>380</sup> At the Jubilee, Kessler's imaginary pilgrim visits San Pietro to see the

---

<sup>376</sup> Francis W. Kent, "Florence, 1300-1600", in *Artistic Centers of the Italian Renaissance, Florence* (Cambridge: Cambridge University Press, 2012), ed by Francis Ames-Lewis, p. 8, where Kent provides examples of Florence's self-praise of her achievements throughout the fourteenth, fifteenth and sixteenth centuries.

<sup>377</sup> Meredith J. Gill, "The Fourteenth and Fifteenth Centuries", in *Artistic Centers of the Italian Renaissance, Rome* ed by Marcia Hall (New York: Cambridge University Press, 2005), p. 27, where Gill describes Rome after 1304 as being beset with "political anarchy, cultural inertia, and urban desolation".

<sup>378</sup> Although the date of the San Pietro mosaic associated with Giotto's name is insecure.

<sup>379</sup> Kessler, *Rome 1300, on the Path of the Pilgrim*, p. 3. Kessler accepts the pre-1300 date as the time when the mosaic was created.

<sup>380</sup> Ibid. p. 2, though Villani is not credited as always being a reliable commentator.

*Navicella*, “a dazzling new work in mosaic by the great Giotto”.<sup>381</sup> The competition between individual churches vying to attract pilgrims’ custom and donations may therefore have been a factor explaining the general renovation of churches, and particularly the installation of mosaics whose splendour was so associated with the divine.

Might Rome’s heritage of early Christian mosaics dating back to the fourth and fifth century have played some part in the resurgence of mosaic art at the end of the thirteenth century? Although there were mosaics installed at the church of Santa Maria Aracoeli in the late-thirteenth century, a church not known to have possessed early Christian mosaics, it is perhaps significant that many of the late thirteenth-century mosaics were installed into Roman churches that already possessed older mosaics. These churches include: Santa Maria Maggiore, with fifth-century mosaics; the basilica of San Pietro that also had early Christian mosaics; and the cathedral of San Giovanni in Laterano, also with a fifth-century mosaic. Similarities between the iconography of early Christian mosaics and those commissioned in the 1290s by Nicholas IV have already been discussed and they suggest that Rome’s heritage may have been a significant factor. Why this influence should have been translated into mosaic commissions around 1300, rather than at some other date, probably resides in a desire to mark a thousand years of Christianity in Rome with the medium most associated with early Christianity.

Cultural Influence from abroad may also figure as a reason for the patronage of mosaics between 1270 and 1529. For many centuries before the early-thirteenth century, the mosaic art of Byzantium had an influence in Venice. As an ally of the Byzantine Empire before 1204, Venice had been greatly influenced by its art and architecture.<sup>382</sup> For example, the Church of the Holy Apostles in Constantinople was used as a model for the architects who built San Marco, and the Venetians may have imported Byzantine mosaicists to decorate its walls.<sup>383</sup> But, the Byzantine influence in

---

<sup>381</sup> Kessler, *Rome 1300, on the Path of the Pilgrim*, p. 217.

<sup>382</sup> Thomas Dale in ‘Cultural Hybridity in Medieval Venice’ in Maguire, *San Marco, Byzantium, and the Myths of Venice*, p. 152.

<sup>383</sup> Otto Demus, “The Main Porch” in *San Marco, the Mosaics, the History, the Lighting* ed by Roberto Caravaggi, pp. 17-19 but particularly p. 19. Also, Tassos Papacostas, “The Medieval Progeny of the Holy Apostles” in *The Byzantine World*, ed. P. Stephenson (Oxford: Routledge, 2010).

Venice diminished after the fall of the Empire in 1204 to the Fourth Crusade, although it never completely disappeared. Demus refers to Byzantine influence as coming in “waves” during the rest of the thirteenth century, reliant upon the employment of occasional Byzantine mosaicists, and the import of precious Christian artefacts such as Byzantine icons, relics, spolia and books.<sup>384</sup> Following the weakening of the Byzantine Empire after the Fourth Crusade, the Venetians promoted themselves as the heir of Eastern Christianity and the city as a site for pilgrimage. They did so by taking Byzantine artefacts and refashioning them and continuing to use the precious medium of mosaic as a decorative medium.<sup>385</sup> As late as 1340, Doge Andrea Dandolo used the Byzantine medium and iconography for the lavish decoration of the Baptistry. He also used mosaic and the iconography of a saint from Chios in the newly built Isidore Chapel. Over time, the iconography of later mosaics in San Marco changed to more fully reflect Western values such as its liturgy, Gothic style and Renaissance ideals.<sup>386</sup> But, the mosaics from the hands and inspirations of Byzantines were not destroyed and replaced, and so the eastern influence in San Marco remained intact. It is perhaps relevant that Venetian painters such as Giovanni Bellini, Vittore Carpaccio and Sebastiano del Piombo as late as 1500 were including images of mosaic apses in their painted altarpieces, thus suggesting that mosaic art was still much valued for its divine associations.<sup>387</sup>

Another possible example of foreign influence can be found in the cathedral in Pisa. It may have had its apse decorated with mosaic to rival that in the Florentine church of San Miniato al Monte, but it is also possible that the Norman mosaics in the Sicilian cathedrals of Palermo and Monreale exerted some influence.<sup>388</sup> A trade link between the island and Pisa seems to have been important. Pisa traded extensively with Sicily, especially for corn, since its surrounding land was of poor quality. To facilitate her

---

<sup>384</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, pp. 198-199. He argues that these “waves” of Byzantine influence interrupted the development of a Venetian style of mosaic work.

<sup>385</sup> Thomas Dale in Maguire, *San Marco, Byzantium, and the Myths of Venice*, p. 189.

<sup>386</sup> Vio, *St. Mark's, The Art and Architecture of Church and State in Venice*, p. 222.

<sup>387</sup> These paintings are *The Madonna in Trono*, *The Madonna and Child* and *San Pietro* by Giovanni Bellini, *The Presentazione di Gesu al Tempio* by Vittore Carpaccio and *The Saints of Ludovico of Toulouse, Bartolomeo, Sebastiano and Sinobaldo* by Sebastiano del Piombo. All these paintings are in the Gallerie dell'Accademia, Venice.

<sup>388</sup> Bellosi, *Cimabue*, p. 238.

trade, Pisa maintained several colonies along the northern coast of the island and it would seem that at least one cultural exchange between northern Sicily and Pisa followed. In the early fourteenth century, two Pisan metal-workers are known to have made a set of bronze doors for Monreale's cathedral.<sup>389</sup> It is perhaps unsurprising therefore that there is a striking resemblance between the image of Christ in Pisa's apse mosaic and the earlier mosaic image of Christ in Monreale's cathedral.<sup>390</sup> The details contained in the two mosaics are so similar as to suggest a Sicilian influence. In the Pisan mosaic, Christ's head is the same shape, it bears similar wrinkles across the forehead and creases in the flesh around the neck, and His hair is streaked with the same shade of lighter-coloured tesserae.

### **Conclusion**

There is no certainty as why patrons commissioned mosaics between 1270 and 1529 and we can only infer reasons from the general circumstances that prevailed in Italy at the time. However, there is a sense that in practice, a combination of factors usually accounted for the installation of any one mosaic during that period. Nicholas IV's late thirteenth-century patronage of mosaics may have resulted from political challenges to the Church's authority and his own papacy, his professional career spent partially in the east, and the influence of early Christian mosaic work in Rome. Dandolo's patronage of mosaics for the Venetian Baptistery in the mid-fourteenth century may have been motivated more by competition with the baptisteries in other cities, as well as a desire to portray the invincible trading and political power of Venice. But Chigi's patronage of mosaic appears more motivated by a search for honour and status in early-sixteenth century Roman society, and perhaps to memorialize his family name. Thus it would seem that the combination of determining factors was fluid, altering according to the varied political, economic, social, religious and cultural circumstances that prevailed at any one time, and in any one city.

---

<sup>389</sup> Eve Borsook, *The Companion Guide to Florence*, 6<sup>th</sup> ed (Woodbridge: Boydell and Brewer, 1977), p. 71.

<sup>390</sup> Borsook, *Messages in Mosaic*, Plate 32.

## Chapter 6

### The declining patronage of mosaics

After the early-fourteenth century, there was a decline in the rate at which mosaic art was commissioned. Why did this happen and why at this point in time? As patrons did not record their reasons for failing to commission mosaics and writers before Vasari had virtually nothing to say about the medium, it is only possible to infer reasons from patrons' actions, and to evaluate the likely consequences for mosaic art of the many political, economic, demographic, social and religious changes that occurred in Italy during the fourteenth, fifteenth and early-sixteenth centuries.

I start by returning to the technology of glass-making to see if it offers any possible explanations for the declining demand for mosaic art after the early-fourteenth century. Chapter 2 suggested that the inherent technological difficulties and time-consuming process of making and colouring glass, producing tesserae and setting them onto walls made mosaic art costly to produce. If it is accepted that mosaics were considerably more expensive than other decorative media, was this a reason for the declining rate at which mosaics were commissioned after the early fourteenth century? In general terms, this does not seem to have been the case. There is no evidence that the demand for mosaic art was affected by its high cost in previous centuries, even though the cheaper alternative of fresco was available. Parts of the Roman catacombs in the fourth century were decorated with mosaic, for instance. And around 1200, Pope Innocent III (1198-1216), commissioned a new apse mosaic for San Pietro, the cost seemingly less important than the benefits to be gained from embellishing this pilgrimage basilica with the splendour and magnificence of mosaic, rather than fresco.<sup>391</sup>

It is worth considering then if patrons became significantly poorer after the early fourteenth century, and mosaic fell way beyond their means. This, although possible, also does not seem to have been the case. One category of patron that had historically

---

<sup>391</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304*, p.220.

commissioned mosaics was the Florentine guilds. The guilds had been wealthy in the thirteenth century, deriving their funds from the enrolment and annual fees of their large membership. At this time, the Calimala, or cloth-finishing guild, was the biggest and wealthiest of the Florentine guilds. In the fourteenth century, the Black Death was thought to have had devastating effects on society, as evidenced by Giovanni Boccaccio's "The Decameron".<sup>392</sup> The effects on the Florentine economy, society and guilds of the Black Death in 1348, and subsequent plagues, has been long debated by scholars.<sup>393</sup> There are those who consider the plagues to have had a depressing effect on the economy, potentially reducing the wealth of the guilds. Other more recent scholars have examined the membership records of guilds and found that membership did not decline, despite the death of approximately one third of the city's population.<sup>394</sup> For example, in the fifteenth century the Por Santa Maria, the silk guild, admitted many more members than it had done prior to the Black Death, thereby increasing its income from membership and annual fees.<sup>395</sup>

If we return to the Calimala guild, we can see that it had commissioned all the internal mosaic decoration of the Baptistery of San Giovanni during most of the thirteenth century, as well as mosaics for the church of San Miniato al Monte at the end of the century.<sup>396</sup> More recent analyses of the effects of the Black Death suggest that the Calimala guild could not have diminished in wealth during the fourteenth and fifteenth century, because its wealth rested on its membership and annual fees, the usually vibrant economy of Florence and the buoyancy of its international cloth "finishing" trade. But it is notable that the Calimala guild chose not to commission any further mosaics during the fourteenth century and only two very small lunette mosaics in the

---

<sup>392</sup> William M. Bowsky, (ed.), *The Black Death, a turning point in history* (New York: Holt, Rinehart and Winston, 1971), pp. 7-12.

<sup>393</sup> David Herlihy, *The Black Death and the Transformation of the West* (Cambridge, Massachusetts: Harvard University Press, 1997), pp. 1-15 gives a summary of scholars' different analyses of the effects of the Black Death. See also, William M. Bowsky, *The Black Death, a turning point in history* (New York: Holt, Rinehart and Winston, 1971), pp. 3-6 for another summary of scholars' views on the effects of the Black Death.

<sup>394</sup> David Herlihy, *The Black Death and the Transformation of the West* (Cambridge, Massachusetts: Harvard University Press, 1997), pp. 44-45. See also Richard Goldthwaite, *Wealth and the Demand for Art, 1300-1600* (Baltimore: The Johns Hopkins University Press, 1993), pp. 34-37 where he points out the importance of a flourishing international trade to the Florentine economy.

<sup>395</sup> *Ibid*, p. 45.

<sup>396</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 343.

mid-fifteenth century.<sup>397</sup> This pattern was repeated by the second wealthiest Florentine guild, the Lana or woollen guild. It was responsible for the cathedral and is known to have commissioned a large mosaic in the late thirteenth century for the reverse facade of the cathedral. Thereafter, it commissioned no further mosaics, even though there was empty wall-space within the cathedral that could have been decorated with mosaic and the guild remained a wealthy institution.<sup>398</sup>

Popes and cardinals in Rome had also been major patrons of mosaic art up until the beginning of the fourteenth century. Their wealth grew in the fourteenth and fifteenth centuries, also making them theoretically able to continue patronising mosaic work. Papal income continued to rest on the two main sources: offerings given for ecclesiastical appointments and favours; and taxes from the feudal states of Naples, Sicily, Sardinia and England, and the papal states of Italy. These sources of wealth did not diminish.<sup>399</sup> The yearly income of the papal treasury under Pope Clement V (1305 - 1314) and Pope John XXII (1316 - 1334) in the first half of the fourteenth century was 250,000 florins, and this figure does not include the popes' huge "secret funds", those kept separate from the main accounts.<sup>400</sup>

Cardinals also remained extremely wealthy during the fourteenth and fifteenth centuries, receiving income from a variety of sources. For example, Cardinal Pietro Corsini received a pension of 1,000 florins annually from Emperor Charles IV in order to promote the ruler's political interests at the papal court.<sup>401</sup> This payment for political favours on behalf of a wide range of individuals and organisations was a

---

<sup>397</sup> Paolucci, *The Baptistry of San Giovanni, Florence*, Vol. 2 (Essays), p. 90. The exterior walls had been decorated with marble slabs between the end of the eleventh and the beginning of the twelfth centuries and would thus have needed removal.

<sup>398</sup> As will be seen in Chapter 6, the decorative programme for the cathedral centred on the medium of stained glass for its windows.

<sup>399</sup> Philip Schaff, *The History of the Christian Church: the Middle Ages, AD 1294-1517*, Vol. VI (Grand Rapids: Grand Rapids, Michigan, 1932), p. 75.

<sup>400</sup> Peter D. Partner, 'Camera Papae: problems of Papal Finance in the later Middle Ages', *The Journal of Ecclesiastical History*, Vol. 4, No. 1, 1953. This paper deals primarily with the extent of the Papal "secret funds". This sum was exceeded however by the King of France's revenues, estimated at 800,000 florins. See Peter Spufford, *Money and its use in Medieval Europe* (Cambridge: Cambridge University Press, 1988), p. 228.

<sup>401</sup> G. Mollat, *The Popes at Avignon*, 9<sup>th</sup> ed., trans. by Janet Love (London: Thomas Nelson and Sons Ltd., 1963), p. 306. This sum was about 200 times greater than an apprentice working for the Bardi bank would have earned in a year. Gino Luzzatto, *The Economic History of Italy* (London: Routledge and Kegan Paul, 2006), p. 117.



frequent source of additional income for cardinals and their wealth rose to such an extent that in 1364, Cardinal Hugues Roger was able to leave more than 10 million French francs on his death.<sup>402</sup> Yet, despite their undoubted and continuing wealth, popes and cardinals almost completely stopped commissioning mosaic art after 1304, when the papal court moved to France. The exception was Pope John XXII's mosaic commission for the facade of San Paolo fuori le Mura in 1328. So, in theory, the two categories of patrons who had historically commissioned mosaics could have afforded to continue doing so. The fact that they chose not to do so means that there were other reasons for the declining patronage of mosaics.

A review of the Florentine guilds' commissioning habits in the fourteenth and fifteenth centuries yields some possible reasons for their movement away from mosaic art. One of the reasons may include their changing artistic tastes. Taste is a very capricious matter and certainly an under-researched area. One suggestion is that it may be founded upon perceptions of "novelty".<sup>403</sup> This might be defined as the use of new materials or techniques, or a resurrection of an "old" form of art, in order to appeal to patrons and stimulate changes to their commissioning habits. In the 1330s, ideas of both an "old" art form and techniques, and "new" devices might have prompted the Calimala guild to commission bronze doors for the south portal of the Baptistry from Andrea Pisano. Bronze doors were not strictly "new", but they had not been made in Italy for approximately two hundred years. Their re-introduction demanded that technically challenging techniques were learned anew.<sup>404</sup> Beyond what was possibly the interesting challenge of casting the doors, new artistic practices were incorporated. These included the newly-arrived, French Gothic device of quadrilobes that contained relief scenes relating to the life of Saint John the Baptist. It could be argued therefore that the novelty of the bronze doors was enhanced by two more

---

<sup>402</sup> Ibid. p. 306.

<sup>403</sup> Alexander Gerard, *An Essay on Taste* (New York: Garland Publishing Inc., 1970), p.2.

<sup>404</sup> Paolucci, *The Baptistry of San Giovanni, Florence*, Vol. 2 (Essays), p. 149, where there is reference to skilled workmen from Venice being called to Florence to assist with the technical process of casting the metalwork.

possible “novelties”, the framing device and the attention given to rarely seen images of the Baptist.<sup>405</sup>

The Calimala guild’s second commission of bronze doors for the east portal of the Baptistery in 1401 from Lorenzo Ghiberti portrayed scenes from *The Life of Christ* and cost the huge sum of 22,000 florins.<sup>406</sup> These doors exhibited a new taste, this time for classical references. Instead of static, forward-facing figures, such as could be seen in the mosaics within the Baptistery that were finished a century earlier, Ghiberti created a sense of tumultuous and expressive action in his figures that owed much to artists’ studies of ancient Greek and Roman relief sculpture and statuary. One quatrefoil displaying the “Arrest of Christ” shows the same arrangement of overlapping figures gathered together in a melee that is apparent in the scene of the charging Roman cavalry at Decebalus’ suicide on Trajan’s column. Another quatrefoil frame showing the “Annunciation” depicts the figure of the Virgin in a contrapposto position, clad in an elegant and classically-inspired, draped garment, recoiling from Gabriel’s forceful delivery of his news (Plate 16). She, like so many other characters shown in the bronze doors, is framed by a piece of early Roman architecture. So, if tastes were changing, what was causing this?

Humanism was an intellectual movement that arose firstly in Italy, in the middle of the thirteenth century.<sup>407</sup> It was particularly notable because it was embraced by laymen who, like notaries, bankers and merchants had been well educated, and this probably aided the dissemination of the movement across Italy. Humanism’s basic purpose was to promote a rediscovery of the writings of ancient writers from classical times, and through this study, to transmit ideas about a more “human” interpretation of God, and an appreciation of the natural world. Witt considers that humanism was an important movement because it, “challenged and ultimately replaced the medieval ethos dominated by rural, clerical and chivalric values”.<sup>408</sup> In other words, it gave the rural

---

<sup>405</sup> Although there is a cycle of mosaic images of John the Baptist in the dome of the Baptistery, they are high up and not particularly visible.

<sup>406</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 155. This was equivalent to the annual cost of defending Florence from external attack.

<sup>407</sup> Ronald G. Witt, *The Two Latin Cultures and the Foundation of Renaissance Humanism in Medieval Italy* (Cambridge: Cambridge University Press, 2012), p. 1 and 10.

<sup>408</sup> *Ibid.*, p. 438.

populations who were already migrating into the towns and cities in the mid-thirteenth century a vision of what life in the urban centres could be like, and how the ancients resolved their civic problems. It is perhaps a bold claim, but not one that can be pursued in this thesis with its already broad scope in terms of chronology and geography.

In Florence, humanist influence was disseminated by a considerable cohort of intellectuals, including men such as Lorenzo de' Medici. In his Florentine garden, he had a private collection of artefacts from antiquity such as early Roman and Greek sarcophagi, pieces of triumphal arches, sculptural reliefs and statuary and he is reputed, initially by Vasari, to have provided a collection of such artefacts for artists to study.<sup>409</sup> Rather, Caroline Elam considers that Lorenzo took artists into his own household and employed them to restore his ancient artefacts and to emulate classical styles. For example, Bertoldo was a salaried member of Lorenzo's household and he is credited with encouraging Michelangelo to study *all'antica* or classical styles, and to leave Ghirlandaio's painting workshop in 1488 and focus on marble sculpture.<sup>410</sup>

Roman and Greek sculptural depiction of multiple, overlapping figures interacting expressively and vigorously with each other seems to have provided patrons and artists in the fourteenth and fifteenth centuries with new ideas about what contemporary art could achieve. This was reflected, for example, in Ghiberti's bronze doors and in a 1425 fresco entitled *The Tribute Money* that was commissioned by the Florentine cloth merchant Felice Brancacci for his chapel in Santa Maria del Carmine. Both examples show how the humanist movement influenced patrons and may have been implicated in the declining use of mosaic in the fourteenth and fifteenth centuries. Mosaic, with its straight, hard-edged tesserae of a single colour that had to be mechanically tapped into place was not a fluid medium like paint that could flow from the brush in all directions and offer gradations of hue. Mosaic's relative lack of flexibility meant it could probably not so easily convey the humanists' antique values

---

<sup>409</sup> Franco Cesati, *The Medici, Story of a European Dynasty*, trans. by Christina Caughlan (Florence: Mandragora s.r.l., 1999), p. 45.

<sup>410</sup> Caroline Elam, "Lorenzo de' Medici's Sculpture Garden" in *Mitteilungen des Kunsthistorischen Institutes in Florenz*, Vol.36, (1/2), p.60-61.

such as movement, expressiveness, realistic depictions of the countryside and a God who related to mankind.<sup>411</sup>

Brancacci's commission could be considered as providing an illustration of artists manifesting their humanist ideas, whilst working within contemporary interpretations of the Bible and current political events.<sup>412</sup> *The Tribute Money* in the Brancacci chapel in Santa Maria del Carmine shows a very "human" Christ engaging with His disciples' annoyance and forcefully instructing Peter to catch a fish with the necessary coins in its mouth to give to the tax collector.<sup>413</sup> It was a new and very different image to the powerful, austere and aloof figure portrayed, for example, in earlier mosaic work in the vault of the Florentine Baptistery of San Giovanni. Here, the huge image of Christ was instantly recognisable because His image was standard and intended to convey a "sacred presence", rather than the aesthetic experience that humanist Renaissance patrons were valuing.

The humanists' studies of the work of ancient writers, such as Pliny, seemed to cause secular and mythological themes to become increasingly popular with patrons during the fifteenth century. It is possible that these themes may have been considered unsuitable for the medium of mosaic since in the fourteenth and fifteenth centuries, the medium still seems to have had divine associations. It had not always had this association. Some early Christian mosaics include secular scenes. For example, there are plentiful images of *putti* harvesting grapes in the ceiling mosaics of Santa Constanza.<sup>414</sup> But in the fourteenth and fifteenth century all examples of secular and mythological subject matter seem to have been painted or sculpted, rather than portrayed in mosaic. For example, Cosimo de' Medici is known to have acquired a copy

---

<sup>411</sup> David B. Ruderman, "Italian Renaissance and Jewish Thought", in *Renaissance Humanism, Foundations, Forms and Legacy*, Vol. 1, ed by Albert Rabil Jr. (Philadelphia: University of Pennsylvania Press, 1991), p. 416.

<sup>412</sup> Richard Trexler, 'Florentine Religious Experience: The Sacred Image', *Journal Studies in the Renaissance*, Vol. 19, 1972, p. 13.

<sup>413</sup> Rolf C. Wirtz, *Florence* (Cologne: Könemann, 2000), pp.492-493. This fresco is dated to around 1425 and is thought to relate to the city's intention to raise taxes in a way that would affect richer families in the city. See also, George Holmes, *Renaissance* (London: Weidenfeld and Nicholson, 1996), pp.44-45 and the conference papers, *The Brancacci Chapel: form, function and settings; acts of an international conference, Florence, Villa I Tatti*, (Florence: L.S. Olschi, 2003).

<sup>414</sup> Brandenburg, *Ancient Churches of Rome from the Fourth to the Seventh Century - The Dawn of Christian Architecture in the West*, p. 15.

of Pliny's "Natural History" and his commission of the painting, *Hercules and the Hydra* from Antonio del Pollaiuolo around 1460, appears to demonstrate his interest in the writer's descriptions of paintings of mythological stories.<sup>415</sup> Similarly, Pliny's descriptions of Apelles' painting of Venus may have prompted a member of the de' Medici family to commission Sandro Botticelli's painting *The Birth of Venus* in 1484.<sup>416</sup> The inclusion in both of these paintings of naked, mythological subjects that were painted in great realistic detail against naturalistic landscapes supports the notion that by the second half of the fifteenth century, patrons' requirements, influenced by humanist thought, were probably not congruent with what mosaic art currently offered, or perhaps, could offer.

Outside of Florence, we see the same process happening. The papal court returned permanently to Rome in 1417 and we see that a similar taste for mythological images emerged, prompted by humanism's interest in the classical past. Pope Nicholas V (1447 - 1455) chose fresco with classical allusions for the decoration of rooms in the Vatican Palace.<sup>417</sup> In the Sala Vecchia degli Svizzeri where cardinals robed before moving into the pope's presence, the walls were painted with putti chasing butterflies, riding storks, playing bagpipes and practising archery. Their source was the classical writings of Cicero and Macrobius.<sup>418</sup>

The influence of the humanists' interest in classicism can be clearly seen in the architecture and decoration of the cathedral in Pienza. In 1459, the humanist Pope Pius II (1458 - 1564) demolished the old cathedral in his home town and had a new cathedral and palace erected. It would seem unlikely that mosaic was ever considered by this pope. The interior exhibits his taste for classical simplicity, clear light and a lack of colour. He left the exterior equally plain, embellished only by two small crests of the

---

<sup>415</sup> Roger J. Crum, "The Florence of Cosimo 'Il Vecchio' de' Medici: within and beyond the walls", in *Artistic Centers of the Italian Renaissance, Florence*, ed by Francis Ames-Lewis, p. 178. See also Sarah Blake McHam, *Pliny and the Artistic Culture of the Italian Renaissance* (New Haven: Yale University Press, 2013), p. 93.

<sup>416</sup> McHam, *Pliny and the Artistic Culture of the Italian Renaissance*, p. 176. The patron may have been Lorenzo de Pierfrancesco de' Medici but there is no certainty about this.

<sup>417</sup> Mori, "The Fifteenth Century: the Early Renaissance", p.381. Both sets of fresco date to the 1440s and 1450s.

<sup>418</sup> Ibid. p. 370. A discussion of the deeper meaning and context of this painting, (which probably dates to the mid-fifteenth century), lies beyond the scope of this thesis.

papal *stemmi* and that of Pope Pius II's family, both sculpted in marble (Plate 17). Its elegant restraint and lack of colour was not unique. It echoes the plain decoration of some Florentine churches at the time such as the interior of San Lorenzo, where Brunelleschi's decorative scheme for the interior adopted a simple, classical motif of grey and white marble wall panels and the sacristy of Santo Spirito, again so classically simple in a monotone of white and grey. These buildings typify the vast change in taste since Pope Nicholas IV commissioned huge, multi-coloured and glowing mosaics for the Roman churches of Santa Maria Maggiore and San Giovanni in Laterano some 150 years previously.

In Orvieto's cathedral, where the facade had been decorated nearly a century beforehand with mosaic depicting scenes from the life of the Virgin, fifteenth-century art commissions were strongly influenced by humanist thinking. They included commissions for framed images of the great ancient philosophers and poets such as Homer, Horace, Virgil and Ovid, which were presented not in mosaic, but painted onto the walls of the Brizio chapel by Luca Signorelli. At the beginning of the sixteenth century the patron, Cardinal Francesco Piccolomini Todeschini, commissioned frescoes for the Piccolomini Library in Siena's cathedral, in memory of his humanist uncle, Pope Pius III (1503).<sup>419</sup> It is perhaps unsurprising that the frescoes are congruent with humanist thinking. These frescoes by Pinturicchio show mythological subjects on the ceiling. On the walls, secular events in the life of Pius III are shown in great detail against a background of buildings in classical style, ornamented with Roman-styled busts in medallions and slender Greek pillars. Behind the arches, the highly detailed mountains, rivers and trees recede into the distance to create a blue landscape. The realism, so extolled by the humanists, was far more difficult to achieve in mosaic.

A small mosaic image of Saint Zenobius made in the early-sixteenth century by Monte di Giovanni in Florence illustrates the difficulty that the medium had in conveying natural landscapes. The mosaic was made in preparation for the project to decorate the Chapel of San Zenobius in the Florentine cathedral and shows the first bishop of Florence set against a landscape of the River Arno powering waterwheels, horse riders

---

<sup>419</sup> Carli, *Siena Cathedral and the Cathedral Museum*, p. 61.

in the fields and the dome of the cathedral in the distance (Plate 18). The tesserae were set flat in the plaster base, with little plaster showing between the tesserae. Yet despite this smooth and ordered appearance, the landscape has an unnatural quality and its rigid lines of tesserae can be clearly seen in close up (Plate 19). Particularly noticeable are the horizontal lines of different shades of blue tesserae to represent the sky. It is the only mosaic of the Renaissance in this study that strives to show such a naturalistic background. But it is a small mosaic and whether it would look more naturalistic if larger and viewed from a distance, as most mosaics are, is debatable.

Changes in the way mosaics were made can be clearly seen by comparing this Renaissance image of San Zenobius with one showing the same saint that was made nearly two hundred years earlier for inside the Florentine Baptistery (Plate 20). The Baptistery mosaic is not much larger, but the saint stands out against a glowing plain gold background with his name picked out in black tesserae either side of his halo. There are no decorations on his bishop's crozier and vestments as there are in the later mosaic. It is a much simpler depiction and has a rough and lively texture, with the tesserae set at angles to catch and reflect candle light.

Renaissance patrons and painters that were influenced by humanist thinking seem to have valued landscapes that reflected and celebrated the real countryside around them.<sup>420</sup> The 1504 mosaic of San Zenobius clearly attempted to replicate that trend but it is possible that patrons had long-before realised that natural scenes flowed more readily from the fluid medium of paint and brush, than from hard-edged tesserae tapped into place by a hammer. But, there were probably other influences at work that served to cause patrons to move away from the medium of mosaics after the early-fourteenth century.

Of great significance to the art of mosaic was the change in the balance of political power in Italy in the late-thirteenth and early-fourteenth century. French power grew in Rome at the papal court and when cardinals and pope left the city in 1304 for

---

<sup>420</sup> Scott Nethersole, *Devotion by Design, Italian Altarpieces before 1500* (London: National Gallery Company Ltd., 2011), p. 92, where each of the five scenes in Niccolò di Liberatore's "Christ on the Cross and other scenes" shows Tuscan landscapes. It was painted in 1487 around the same time that Monte di Giovanni made his trial scene of the landscape outside of Florence.

France, the consequences for the art of mosaic were devastating.<sup>421</sup> The reasons for this appear to be two-fold. In the first place, the absence of the papal court left a power vacuum in Rome. Civil unrest erupted, and in the ensuing poverty and physical decline of Rome's buildings and infrastructure, new patrons of mosaic did not emerge in the city. Artists left the city for want of employment.<sup>422</sup> Ruscuti, who installed the facade mosaic at Santa Maria Maggiore, went to Paris and Poitiers where he is recorded as the *pictor regis* in 1304 but he does not seem to have made mosaics in France.<sup>423</sup> Cavallini and Giotto who had created mosaics for Santa Maria in Trastevere and possibly San Pietro left Rome for the kingdom of Naples, where they were commissioned to paint frescoes.<sup>424</sup> They may have taken some or all of their assistants with them, and it is probable that any glass-makers who made tesserae in Rome would have been left with few or no orders. It therefore seems likely that over time, the skills and art of making tesserae and mosaics must have diminished or been lost in Rome, making it problematic for anyone in the city to consider commissioning mosaic work thereafter. This is supported by the fact that when the dome of Chigi's chapel in Rome was decorated with mosaic in the early-sixteenth century, the mosaicist was called from Venice.

The transference of cardinals and the pope from Rome to France had a second and similarly devastating consequence for mosaic art. These patrons, who had previously been major commissioners of mosaics, changed their allegiance to other forms of art once they were in residence in Avignon. To accommodate the size of the papal court, which encompassed some 300 to 400 clerics of differing rank, supported by approximately 4,000 courtiers and tradesmen, the court expanded the city.<sup>425</sup> Popes commissioned the Palais des Doms and cardinals built their own palaces, castles, churches, clock-towers and extended religious houses but, as far as is known, no popes or cardinals commissioned mosaic decoration for any building in Avignon, or elsewhere in France. Pope John XXII was the only pope resident in Avignon in over seventy years

---

<sup>421</sup> Walter K. Ferguson, *Europe in Transition, 1300-1520* (Boston: Houghton Mifflin, 1962), p.220.

<sup>422</sup> Bussagli, *Rome, Art and Architecture*, p. 372.

<sup>423</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304*, p. 383.

<sup>424</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304*, p. 383. Cavallini is recorded at Naples in 1308 but the date of his arrival is uncertain.

<sup>425</sup> Mollat, *The Popes at Avignon*, p. 280.



to commission mosaic, and this was for the Roman church of San Paolo fuori le Mura.<sup>426</sup> Instead, church revenues were spent on many artistic projects to decorate the new buildings in Avignon, and these buildings were not Romanesque, with dark interiors and solid, rounded apse walls that so suited mosaic decoration, but Gothic buildings with many light-filled windows that enhanced fresco decoration. For example, in the 1330s, Cardinal Stefaneschi, who has been associated with the commission of the *Navicella* mosaic for San Pietro in Rome, brought Simone Martini of Siena, Lippo Memmi and Matteo Giovanelli to Avignon. Martini decorated the cathedral of Avignon with frescoes, whilst Giovanelli painted frescoes in the popes' private chapel within the Palais des Doms.<sup>427</sup>

So why did ecclesiastical patrons fail to continue their traditional patronage of mosaics from their new court in Avignon? <sup>428</sup> The reasons behind six popes' failure to commission mosaics over a seventy-year period in Avignon are not clear, but may relate to the fact that they were all Frenchmen, without any heritage of Rome's early Christian mosaics. <sup>429</sup> Furthermore, the French popes were not essentially theologians interested in the early art and history of the church, but officials whose primary interests seem to have lain in financial dealings and maximising papal revenues.<sup>430</sup>

A further explanation may have been the popes' and cardinals' desire to commission something novel, rather than mosaic, a medium that might have been perceived as associated with the past. Such thinking may, as noted earlier, have influenced the Calimala's commission of bronze doors in Florence. Pope Urban V (1362 - 1370) chose to devote 30,000 florins to a new ciborium for the Roman cathedral of San Giovanni in Laterano, which was considerably more than the 22,000 florins that the Calimala guild spent on Ghiberti's innovative bronze doors some thirty years later. <sup>431</sup> This ciborium

---

<sup>426</sup> This was for the facade of the Roman church of San Paolo fuori le Mura, now lost.

<sup>427</sup> Mollat, *The Popes at Avignon*, p. 112.

<sup>428</sup> The papal court left Rome in 1304. It did not initially settle in Avignon. It returned briefly to Rome in the 1360's, but did not return permanently to Rome until 1417.

<sup>429</sup> Yves Renouard, *The Avignon Papacy 1305-1403*, trans. by Denis Bethell (Hamden, Connecticut: Archon Books, 1970), p. 136.

<sup>430</sup> Ibid. p. 136.

<sup>431</sup> Mollat, *The Popes at Avignon*, p. 318. The ciborium dates to 1362-1370 and was made by the Sienese architect Giovanni de Stafano and Sienese goldsmiths, Giovanni di Bartolo and Giovanni di Marco. For the purposes of comparison, the annual papal income during the 1320s was around 200,000 florins." Spufford, *Money and its use in Medieval Europe*, p.228."

displayed some novel features, the most obvious being that it was made of metal. Earlier ciborii, for example, Arnolfo di Cambio's work for the Roman church of San Paolo, had been sculpted from stone and decorated with mosaic.<sup>432</sup> In contrast, Urban V's ciborium was splendidly wrought in silver-gilt, with spires and high pinnacles thrusting upwards in the new French Gothic manner. It was not decorated with mosaics but with precious sapphires, emeralds and pearls, sculpted marble statues of the saints, and twelve fresco panels.<sup>433</sup> It forms a good example of a patron choosing a new medium for a long-established artefact, as well as illustrating the continuing vast spending power of the Avignon popes.<sup>434</sup>

The emergence of a new category of patron who had no history of commissioning mosaic art was crucially important for the arts. These new patrons, many of them from Florence, included bankers, merchants and manufacturers who had become wealthy as a result of the city's economic success. This in turn rested on Florence's territorial expansion, increasing trade in woollen goods and the provision of international banking services. The 1427 Florentine tax return or *castato* showed how many Florentines were at least moderately wealthy at that time. Apparently 1,649 inhabitants of the city claimed to have assets worth more than 1,000 florins, or the equivalent of a craftsman's pay for fifteen years.<sup>435</sup> Some merchants such as Giovanni di Bicci de' Medici were far wealthier. He left 180,000 florins in his will of 1429, and by the middle of the fifteenth century, Cosimo de' Medici and Giovanni Rucellai had made great fortunes from trade in excess of 100,000 florins each. Despite being probably wealthy enough to afford mosaic art, none of these three merchants or any other Florentine merchants are known to have commissioned any mosaics.<sup>436</sup> Other media were proving attractive to this newly emerging class of patrons. Rucellai, for instance, commissioned the vast marble facade emblazoned with his name at Santa Maria Novella but the wealthy Florentine international banker and wool merchant, Tommaso

---

<sup>432</sup> Bussagli, *Rome, Art and Architecture*, p. 342. The ciborium dates to 1285.

<sup>433</sup> Ibid. pp. 295-296.

<sup>434</sup> Mollat, *The Popes at Avignon*, p. 218, though the Queens of France, Navarre and Naples also made contributions towards the total cost of the ciborium.

<sup>435</sup> Richard A. Goldthwaite, *Wealth and the Demand for Art in Italy* (Baltimore: The John Hopkins University Press, 1993), p. 60.

<sup>436</sup> Ibid. p. 61. Architecture was, "by far the most important expenditure rich Italians made".

Strozzi, provides a more typical example of the commissioning of Florentine merchants.<sup>437</sup> The Strozzi family founded a chapel in Santa Maria Novella in 1319, and in 1357 Tommaso commissioned a large fresco from Nardo di Cione and an altarpiece from Andrea di Cione.<sup>438</sup> In the large church of Santa Croce, merchants such as Bardi and Peruzzi commissioned Giotto to fresco their chapels in the second and third decades of the fourteenth century.<sup>439</sup> Later, the merchant Baroncelli commissioned Taddeo Gaddi to decorate his chapel with fresco and these commissions for the church of Santa Croce were not untypical.<sup>440</sup> Many other Florentine chapels in churches that include Ognissanti, Santa Trinità, Santissima Annunziata and San Miniato al Monte were decorated with fresco in the fourteenth and fifteenth centuries by this new category of patron.

As well as an interest in classical times and humanism, the emerging category of new patrons in Florence showed a growing degree of piety that would have consequences for the art of mosaic. This heightened religious attitude seems to have related closely to the recurrent plagues that swept across Italy, particularly to the severe outbreak of 1348 during which approximately one-third of the population of Florence died.<sup>441</sup> Before the mid-fourteenth century, few funeral chapels had been constructed, but such was the continual demand for burial inside them that during the fifteenth century, an estimated 600 chapels were erected in Florence. The architect Brunelleschi responded to this level of demand by building all of his new churches with chapels, attaching 38 side chapels to the Florentine church of San Spirito, for example.<sup>442</sup> Rich

---

<sup>437</sup> Wirtz, *Florence, Art and Architecture*, p. 199-200.

<sup>438</sup> Samuel K. Cohn, *The Cult of Remembrance and the Black Death. Six Renaissance Cities in Central Italy* (Baltimore and London: John Hopkins University Press, 1997), p. 218. Chapels go back to Early Christian times but do not emerge again until the 1290's in Italy. Subsequently, the 1427 castato shows that Palla di Nofri Strozzi declared a taxable wealth of 162,925 florins, making him the wealthiest citizen in Florence. This would have enabled him to build about 17 elite palaces in Florence in the early 15<sup>th</sup> Century. See Richard Goldthwaite, *Banks, Palaces and Entrepreneurs in Renaissance Florence* (Aldershot: Ashgate, 1995), VII, p. 2. For his commission, see Wirtz, *Florence, Art and Architecture*, p. 215.

<sup>439</sup> Wirtz, *Florence, Art and Architecture*, pp. 379-381.

<sup>440</sup> *Ibid*, p. 384.

<sup>441</sup> David Herlihy, *The Black Death and the Transformation of the West* (Cambridge, Massachusetts and London: Harvard University Press, 1997), p. 62. In times of plague, death happened without confession, tolling bells, cortege processions, candles, masses, blessings and funeral meals.

<sup>442</sup> Goldthwaite, *Wealth and the Demand for Art in Italy*, p. 123.

merchants such as Strozzi, Bardi, Peruzzi and Baroncelli often commissioned far more than one family burial chapel.<sup>443</sup>

Parallel to the demand from this new category of patrons for burial chapels ran a demand for their decoration. However, records relating to the merchant Gianfigliuzzi indicate the value that he accorded to fresco. Gianfigliuzzi spent 1,200 florins on frescoes for his funeral chapel.<sup>444</sup> This compares with his expenditure of 500 florins for the rights to a chapel at Santa Trinità, 700 florins on stained glass, 500 florins for masses to save his soul from purgatory, 300 florins on a tomb and 500 florins on a range of other items including altar furnishings and choir stalls.<sup>445</sup> An examination of the iconography of the frescoes and altarpieces that patrons chose for their funeral chapels perhaps further explains why they selected paint. Particularly after the plague of 1348, frescoes include more figures, not only of the patron, his relatives and acquaintances, both deceased and alive, but “plague saints” to protect them, such as the blessed Anthony Abbot.<sup>446</sup> This “cult of remembrance” resulted in paintings becoming full of secular figures. Not only would it have been very time consuming, and therefore costly to have portrayed all these figures in mosaic, it is possible that the medium was not thought appropriate. Mosaic was perhaps still too closely associated with the divine.<sup>447</sup>

Given the number of funeral chapels that were constructed in Florence in the late fourteenth and fifteenth centuries, the speed with which they could be decorated may have been a factor that influenced patrons’ choice of media. There is no certainty as to how long it took for a mosaic to be completed, but it has been estimated by DeLaine that it took 5.3 days for a man to set one square metre of mosaic on the vault of the Roman Baths of Caracalla in AD 216, although she also references a very different

---

<sup>443</sup> Cohn, *The Cult of Remembrance and the Black Death. Six Renaissance Cities in Central Italy*, p. 266. The purchase of burial chapels percolated down to occupational workers such as goldsmiths and sculptors.

<sup>444</sup> Jonathan K Nelson and Richard J. Zeckhauser, “Private Chapels in Florence: a paradise for signalers”, in *The Patron’s Payoff* ed by Jonathan K Nelson and Richard J. Zeckhauser (Princeton: Princeton University Press, 2008), pp. 120-121.

<sup>445</sup> The apothecary, Luca Landucci was earning fifty florins a year in Florence in 1462, see Luca Landucci, *A Florentine Diary from 1450 to 1516* (London: J.M. Dent and Sons, 1927), p. 3.

<sup>446</sup> Cohn, *The Cult of Remembrance and the Black Death. Six Renaissance Cities in Central Italy*, p. 263. The “cult of saints” was a search for heavenly protection from plague.

<sup>447</sup> *Ibid.* p. 256.

nineteenth-century calculation of the time taken to install tesserae at Monreale's cathedral.<sup>448</sup> According to this calculation, it took 10 to 14 man-days to set a square metre of tesserae into a mosaic.<sup>449</sup> By the late thirteenth century, it is unlikely that the process would have been any speedier than the lower estimate of 5.3 days per square metre since the process remained essentially the same. It is worth noting that these figures do not allow for the time to make glass, colour it and cut the tesserae. Thus, the time taken to create a mosaic may have discouraged patrons from commissioning the medium. In comparison, Masaccio took 27 or 28 days to complete the fresco of the *Trinità* in the Florentine church of Santa Maria Novella in 1426.<sup>450</sup> As the fresco has an area of 21 square metres, Masaccio was able to fresco approximately one square metre in less than a day. Pisanello's daily rate whilst painting the fresco of *Saint George Slaying the Dragon* was about the same.<sup>451</sup> Thus mosaic would appear to be at least five times slower than fresco. When so many patrons wanted to decorate their burial chapels at any one time, the slower rate of mosaic work and consequent delay in getting the decorative work started and completed may well have been seen by patrons as a considerable drawback.

It is also likely that patrons' choice of fresco as decoration for their funeral chapels was influenced by their support of the mendicant, or "begging" movement.<sup>452</sup> This was a popular, charismatic and dynamic movement that devoted itself to preaching to urban populations, rather than the ritualised administration of sacraments. The mendicants became champions of the Gothic style of architecture since it gave them a single, open and airy space that allowed congregations to see the priest in the pulpit and any visual

---

<sup>448</sup> DeLaine, *Design and Construction in Roman Imperial Architecture, The Baths of Caracalla in Rome*, p. 317.

<sup>449</sup> Ibid. p. 317. This figure was cited by Demus in 1949. The calculations would have been influenced by the time of year when the mosaic-work was in progress and the length of the working day.

<sup>450</sup> Woods, *Making Renaissance Art*, p. 68. The number of "giornate" (work completed in each day) was counted to give this figure.

<sup>451</sup> Woods, *Making Renaissance Art*, p. 39. The fresco was commissioned for Sant' Anastasia, Verona and completed in 1438. The figures assume that the painter worked without interruption on a single commission. This was not always the case and explains why patrons chose to incorporate delivery dates into contracts, with fines for late-delivery.

<sup>452</sup> Janet Robson, "Florence before the Black Death", in *Artistic Centers of the Italian Renaissance, Florence*, ed by Francis Ames-Lewis, p. 42. The Mendicant Orders included the Franciscans, Dominicans, Augustines, Carmelites and Servites.

aids that he may want to use, as well as his presence at the altar.<sup>453</sup> Gothic stone vaulting, rather than wooden rafter ceilings helped to improve the acoustics and in the last quarter of the thirteenth century, very many new Gothic-styled churches were built in Central Italy to fulfil the mendicants' purposes.<sup>454</sup> Additionally, some old churches were adapted and enlarged by the mendicants, as for example at San Francesco in Rimini.<sup>455</sup> Despite the vast amount of building at the end of the thirteenth century, some construction work was held up by disputes between the different factions in the Franciscan order. At the Florentine church of Santa Croce, for example, the Observantists, who wanted to cling to the basic tenet of poverty, stood in the way of others who wanted to emulate, or compete, with the Dominican church of Santa Maria Novella on the other side of Florence.

The fundamental architectural style that was chosen by the mendicants for their new churches, such as Santa Maria Novella and Santa Croce in Florence, San Francesco in Assisi and Santa Maria Gloriosa dei Frari in Venice, was therefore Gothic, and based on the shape of a Latin cross. However, there was no one single mendicant architectural style. Even the floor plans of mendicant churches in the same town are different, thus the floor plan of San Francesco and Santa Chiara in Assisi differ.<sup>456</sup> The Gothic style incorporated large windows in the apses and other walls which gave the buildings spacious and light interiors, replacing the darkness of the older Romanesque churches which, when lit by a myriad of candles, so suited the medium of mosaic. The triumphal arches that were so often covered with mosaic in Romanesque churches disappeared from use, and given the emphasis on simplicity as a developing architectural ideal, the walls of these new Gothic churches were either left white, as happened initially at San

---

<sup>453</sup> Caroline Bruzelius, *Preaching, Building, and Burying, Friars and the Medieval City* (New Haven: Yale University Press, 2014), p. 132. The visual aid may have been a painting on linen, for example.

<sup>454</sup> John White, *Art and Architecture in Italy, 1250-1400* (New Haven: Yale University Press, 1993), p.38. These include, for example, the cathedrals at Arezzo, Massa Marittima, Florence and Orvieto and the churches of Santa Croce, Florence, Santa Maria sopra Minerva, Rome, and the Baptistry and Camposanta cemetery in Pisa. See also, Marvin Trachtenberg, "Gothic/Italian Gothic. Toward a Redefinition" in the *Journal of the Society of Architectural Historians*, Vol. 50, No.1 (1991), pp.22-37.

<sup>455</sup> Bruzelius, *Preaching, Building and Burying*, p. 89.

<sup>456</sup> White, *Art and Architecture in Italy: 1250-1400*, p. 34. I have not entered the debate about the "purity", or otherwise, of the Gothic style used in these buildings. See also p. 25 for plans of both buildings.

Francesco, in Assisi, or painted with fresco.<sup>457</sup> The facades on the new Gothic churches tended to remain plain, rather than bear mosaic-work.<sup>458</sup> It is unsurprising therefore that when funeral chapels were attached to these newly-built churches after the middle of the fourteenth century, they were decorated with fresco, rather than mosaic.

In the second place, the mendicants' receipt of papal permission to allow the burial of laity within their churches was highly significant and as previously discussed, the construction of side chapels for this purpose became increasingly common after the 1348 plague.<sup>459</sup> This privilege afforded to the mendicants and the high demand for funeral chapels from patrons probably ensured that the mendicants could require patrons' conformity with their own principles.<sup>460</sup> The movement's early espousal of simplicity and poverty to replicate that of Christ caused most mendicants in their early days to reject opulent decoration.<sup>461</sup> It is unlikely that even in the fourteenth and fifteenth centuries they would have countenanced mosaic, though there appear to be no specific injunctions to this effect.<sup>462</sup> The absence of mosaic decoration in large Dominican and Franciscan churches such as Santa Maria Gloriosa dei Frari in Venice, San Francisco in Assisi, and Santa Maria Novella and Santa Croce in Florence is notable and indicative of constraints on opulent decoration such as mosaic.<sup>463</sup> And furthermore, merchants, manufacturers and bankers may have constrained themselves from commissioning anything too opulent for fear of provoking criticism,

---

<sup>457</sup> Joanna Cannon, *Religious Poverty, Visual Riches* (New Haven: Yale University Press, 2013), p. 19. The walls of San Francesco in Assisi were left white-washed for about fifty years before being painted with fresco.

<sup>458</sup> The facade of Santa Maria Gloriosa dei Frari was left in plain brickwork with small amounts of marble detailing around the windows and door.

<sup>459</sup> Goldthwaite, *Wealth and the Demand for Art in Italy*, p. 82.

<sup>460</sup> Bourdua, *The Franciscans and Art Patronage in Late Medieval Italy*, pp. 19-25, where Bourdua deals with the attitudes of the Spiritual and Conventual Franciscan groups towards poverty.

<sup>461</sup> There were exceptions to the Franciscans' early espousal of poverty, especially over the passage of time. So, for example, the mendicant church of Santa Maria in Aracoeli in Rome contains mosaic-work and the first Franciscan pope, Nicholas IV was a patron of mosaics.

<sup>462</sup> Goldthwaite, *Wealth and the Demand for Art in Italy*: p. 82. See also White, *Art and Architecture in Italy, 1250-1400*, p. 30, where the author states that two prominent members of the Spiritual Franciscan sect, Pietro Olivi and Uberto da Casare, were living in the monastery of Santa Croce, Florence whilst the church was being built. Around 1310, they were speaking out publicly about excessive luxury being an affront to Christ.

<sup>463</sup> An exception is the Franciscan church of Santa Maria Aracoeli in Rome which had a mosaic on its facade.

envy and potentially damaging rivalry in their business or political affairs. It is known that Lorenzo de' Medici, for example, was particularly aware of this potentially adverse repercussion when commissioning art.<sup>464</sup>

It is likely that the emergence of newly available decorative devices such as glazed terracotta, intarsia and formal Renaissance gardens in the fourteenth and fifteenth centuries may have aroused such interest amongst wealthy merchants that they may have played a part in eclipsing mosaic art.<sup>465</sup> For example, in Florence, the wealthy silk guild commissioned fourteen glazed terracotta reliefs to adorn the facade of the *Ospedale degli Innocenti* (the Foundlings' Hospital) in Florence in the mid-fifteenth century. Each relief shows a differently swaddled babe in white against a blue background, a colour combination that was favoured during the Renaissance. These reliefs provided a simple decoration for the facade, above the slim, classically-inspired columns. Furthermore, the della Robbia's addition of a higher quantity of tin oxide in the glaze than previously used, rendered them particularly resistant to any adverse weather conditions in this exterior position, and especially as intensifying the quality of whiteness in the relief which was believed in the fifteenth century to symbolise the light of God and purity.<sup>466</sup>

As well as constituting a "novelty", the development of terracotta ornamentation probably also reflects the Florentines' fascination with classical civilisations. Petrarch's studies of ancient texts and reference to Pliny's praise of clay as, "...more worthy of honour than gold....and more innocent...", may have resonated in a society that was warned against the flaunting of gold, furs and other precious objects since they were thought to stand in the way of individuals' true piety.<sup>467</sup> Humanists such as Petrarch also extolled clay as a splendid material which was used by the early Romans to create images of their gods, and this may also have been influential in the development of

---

<sup>464</sup> Kent, *Lorenzo de' Medici*, p. 43

<sup>465</sup> Intarsia is wooden inlay work using different types and colours of wood. Formal Renaissance gardens had an architectural dimension.

<sup>466</sup> Bruce Boucher, (ed.) *Fire, Earth: Italian terracotta* (London: Victoria and Albert Publ., 2002), p.14. See also Stephanie R. Miller, "A material distinction: fifteenth century tin-glazed terracotta portraits in Italy" in *Sculpture Journal*, Vol. 22, 2013, p. 10.

<sup>467</sup> Ibid, quoted on p. 8 and for sumptuary laws, see p. 9.



terracotta relief sculptures and tin-glazed terracotta portrait busts.<sup>468</sup> So might the remembrance that the Hebrew God fashioned mankind from clay.<sup>469</sup> The Franciscans were particularly attracted to the earthiness of the basic material and so, at a very special site for the Franciscans at La Verna, where Saint Francis was thought to have received his stigmata, they raised an altar surmounted by a terracotta, tin-glazed altarpiece made by Andrea della Robbia.<sup>470</sup>

However, the Florentine silk guild and the Franciscans were not the only patrons of tin-glazed terracotta reliefs. They appear to have become “fashionable”, something that many other patrons were eager to commission, to the possible detriment of mosaics.<sup>471</sup> During the fifteenth century, the workshops of the della Robbia family mass-produced tin-glazed terracotta reliefs in order to cater for an increasing number of individual people who wished to donate a piece of art work to a church, or convent or hospital as a pious act. These reliefs were often made in moulds, enabling multiple copies to be made cheaply from one design and many della Robbia tin-glazed reliefs survive in the villages and museums of central Italy.<sup>472</sup> In rural villages such as Radicofani situated south of Siena, one small church that was not Franciscan, was able to commission three large della Robbia tin-glazed reliefs for each of its altars (Plate 21).<sup>473</sup> However, wealthy patrons also commissioned della Robbia tin-glazed reliefs, and this perhaps illustrates how “fashionable” they had become. There are many examples of wealthy Florentine patrons commissioning terracotta reliefs from the mid-fifteenth century onwards, or joining in with what others were commissioning. Piero de’ Medici paid for a Romanesque style tabernacle with a barrel roof to house a crucifix in the Florentine church of San Miniato al Monte. The tabernacle’s ceiling was

---

<sup>468</sup> Ibid, the whiteness of the tin-glaze was thought to imbue the individual’s portrait with qualities such as innocence and purity.

<sup>469</sup> McHam, *Pliny and the Artistic Culture of the Italian Renaissance*, p. 330.

<sup>470</sup> Bruce Boucher, *Fire and Earth, Italian Terracotta*. See also, Gentilini Giancarlo, *Della Robbia*.

<sup>471</sup> Francis Haskell, *Rediscoveries in Art, Some aspects of Taste, Fashion and Collecting in England and France* (Oxford: Phaidon, 1980), pp. 6, 7, where he notes the power of impressions caused by new materials and techniques and also the role of contemporary scholars in extolling, or deriding, new media.

<sup>472</sup> The use of moulds meant that multiple copies could be produced at a lower cost than sculpture. Information provided by Dr. Steve Wharton, University of Sussex.

<sup>473</sup> The other church in Radicofani also has a large della Robbia tin-glazed relief serving as an altarpiece. This may suggest an element of patrons trying to rival one another.

decorated with terracotta reliefs in blue and white made by Luca della Robbia.<sup>474</sup> The patron of the della Robbia ceiling in the Portuguese chapel, in the same church of San Miniato al Monte, is thought to have commissioned terracotta roundels of the Cardinal Virtues in order to create the finest ceiling in Florence. And, for his chapel in the Florentine church of Santa Croce, the merchant and patron, Pazzi, commissioned terracotta reliefs showing busts of the apostles, and undoubtedly, this wealthy merchant would have been able to afford any form of decoration that he so chose.<sup>475</sup>

Glazed terracotta was also commissioned for domestic settings. For example, Piero de' Medici commissioned glazed terracotta decoration for the barrel-vaulted ceiling of his small study in the family's Florentine palace. Roundels, called "The Labours of the Months" show rural activities during the twelve months of the year, and are thought to have been based on descriptions in a 1<sup>st</sup> century text on agriculture. Additionally, the borders of light and dark blue around the images indicate the length of light and darkness in each month. The terracotta decoration was admired by Filarete, architect and sculptor, who wrote, "....whoever enters (the study) is filled with admiration".<sup>476</sup> Perhaps this influenced his son, Lorenzo de' Medici, a man of great wealth and culture, who chose to decorate the prestigious entrance to his *Villa di Poggio a Caiano* with a glazed terracotta frieze some eighteen metres long.<sup>477</sup>

The similar challenge to the art of mosaic was offered by the new medium of intarsia. Its popularity in the fifteenth century seems to have derived from contemporaries' fascination with the science of optics, and the ease with which the medium could represent perspective.<sup>478</sup> There are many geographically widespread examples of the use of intarsia in Italian churches. These include: the church of San Francesco in Assisi, where there are 68 inlays of intarsia in the choir stalls (Plate 22); the choir stalls in

---

<sup>474</sup> Megan Holmes, *The Miraculous Image in Renaissance Florence* (New Haven: Yale University Press, 2013), p. 249.

<sup>475</sup> Wirtz, *Art and Architecture of Florence*, p.383. The chapel was designed by Brunelleschi.

<sup>476</sup> Victoria and Albert Museum, (no date), [collections.vam.ac.uk/item/O93282/march-roundel-della-robbia-luca/](https://collections.vam.ac.uk/item/O93282/march-roundel-della-robbia-luca/) [accessed 23 December 2016].

<sup>477</sup> Michael Levey, *Florence* (London: Jonathan Cape, 1996), p. 204, 205. See also, *Cristina Acidini Luchinat, Renaissance Florence, the Age of Lorenzo de' Medici* (Milan: Edizioni Charta, 1992), pp. 138, 139. This was one of the de' Medici's country residences. An illustration of Poggio a Caiano can be found in Mario Scalini, *Florence, the Golden Centuries* (New York: Barnes and Noble, 1999), pp. 140-141.

<sup>478</sup> Florence was one of the main centres for the manufacture of lenses in the fifteenth century which may have underpinned interest in central Italy for optics and perspective.

Monte Oliveto Maggiore in the province of Siena; the Old Sacristy of Florence cathedral where it was used to decorate large cupboard doors; and in Pisa and Siena where intarsia was used to decorate choir stalls in the cities' cathedrals.<sup>479</sup> In the Venetian church of Santa Maria Gloriosa dei Frari there are 124 choir stalls, each elaborately inlaid with intarsia dating to 1468.<sup>480</sup> Its "novelty" may possibly explain why intarsia aroused such interest amongst those responsible for the fabric of churches, but also why it also became popular as a decorative medium in domestic dwellings. The wealthy Florentine merchant and artistic patron, Filippo Strozzi, is known to have commissioned intarsia on several occasions for his country villa at Santuccio in the 1480s.<sup>481</sup>

Formal Renaissance gardening was another new form of decoration that seems to have become "fashionable" amongst patrons in the fifteenth century. Humanists such as Alberti encouraged the development of classically-inspired gardens based on those of ancient Rome, in order to adorn the many country villas in the Tuscan landscape, and elsewhere. Some families invested very considerable sums of money in elaborate, rural gardening projects that included much "outdoor architecture" such as stone terraces, grand flights of steps, pergolas, fountains and classical statuary.<sup>482</sup> The Strozzi family, for example, owned thirty-two villas and gardens in the countryside surrounding Florence in the fifteenth century and the claim by the great-grandson of the merchant, Francesco Sassetti, that 12,000 florins had been spent on just one garden at La Pietra gives an indication of what patrons were willing to spend on this medium.<sup>483</sup> The fashion for these decorative gardens, intarsia, terracotta tin-glazed

---

<sup>479</sup> The intarsia in Assisi was made by Domenico Indovini between 1491 and 1501. An illustration of the Old Sacristy cupboard doors can be seen in the plate opposite p. 96 in Borsook, *The Companion Guide to Florence*. Examples of Pisan intarsia can be seen in the cathedral's presbytery and museum. See Gianfranco Malafarina, *Il Duomo di Pisa*, pp. 108-111.

<sup>480</sup> See Gianfranco Malafarina, *Il Duomo di Pisa*, pp. 108-111. These choir stalls were decorated with intarsia and carved portraits by Francesco and Marco Cozzi of Vicenza and they signed their work. They are still in situ. Intarsia can be seen in the presbytery as well as in the cathedral's museum. (Fieldwork).

<sup>481</sup> Amanda Lillie, *Florentine Villas in the Fifteenth Century* (Cambridge: Cambridge University Press, 2005), p. 95.

<sup>482</sup> Amanda Lillie, *Florentine Villas in the Fifteenth Century*, p. 73.

<sup>483</sup> Ibid. p. 187. The Renaissance garden would subsequently spread to Rome, the Veneto, Marche and northern Italy. See also Georgina Masson, *Italian Gardens* (Woodbridge: ACC Publishing Group, 2011). For a monetary comparison of this sum of 12,000 florins, in 1462, Strozzi's real estate was said to be worth 26,721 florins so he was spending just short of half the value of his estate on one garden. Goldthwaite, *Private Wealth*, p. 249, footnote 25.

reliefs and *credenza* suggests a desire amongst patrons to “conform” to what other cultured patrons were commissioning. In contrast, it may have been that mosaic art was perceived by patrons as “unfashionable”, a notion that was alluded to by Giorgio Vasari in the mid- sixteenth century, but which may have held true a century earlier. He wrote of mosaic work that it, “...moves us to laughter than to pleasure or marvel”, and heaped praise on Cimabue for sweeping away the Byzantine-styled mosaics of the Greeks, which he described as, “....rough, rude and vulgar”.<sup>484</sup>

Further challenges to the commissioning of mosaic art may have been offered by media that were not new, but becoming increasingly popular. One possible explanation for the increasing use of stained glass in ecclesiastical buildings may have been that in the late medieval period around 1300, light was perceived as a metaphor for the divine, as in, “God is light, and in Him there is no darkness” (John, 1:5), and that this encouraged the use of stained glass in the new, Gothic style buildings.<sup>485</sup>

Stained glass had been used to fill the windows of the great Gothic churches of the mendicant orders such as San Francesco of Assisi from the mid-thirteenth century onwards.<sup>486</sup> Like Gothic architecture, the medium had spread from France, where, according to Abbot Suger’s writing about the church of St. Denis, stained glass was endorsed because it created a “mystery” by glowing without fire.<sup>487</sup> In 1285, the *Opera del Duomo* in Siena commissioned Duccio to install a large stained glass window above the altar.<sup>488</sup> The window, now in the *Museo del Opera*, is predominately blue, flashed with canary yellow, blood red, pale green and purple, and in its original

---

<sup>484</sup> Giorgio Vasari, *Lives of the Most Eminent Painters, Sculptors and Architects*, trans. by Gaston duc de Vere, Vol. 1 (London: Philip Lee Warner, publisher to the Medici Society, 1912), pp. 86 and 52. Vasari was referring to the work of Andrea Tafi in the Florentine Baptistery.

<sup>485</sup> Ibid. p. 13. A parallel may be seen with gold’s association with the divine and the extensive use of gold tesserae in mosaics.

<sup>486</sup> White, *Art and Architecture in Italy: 1250-1400*, p. 184. The windows at Assisi were installed by German artists at a time when the walls of San Francesco were still white-washed which may have intensified the impact of the stained glass. See also Cooper, *The Making of Assisi*, p. 75, where he says that the stained glass in the apse and the rose windows were perhaps as a result of Pope Innocent IV’s seven year residence in Lyon.

<sup>487</sup> Robert Branner, *Gothic Architecture* (London: Prentice-Hall International, 1961), p. 21. Suger believed that stained glass had three basic properties: a bearer of holy images, an intrinsically rich material, and a mystery. On Suger’s decoration of St. Denis in Paris, see Erwin Panofsky (ed), *Abbot Suger*, 2<sup>nd</sup> ed. (Princeton: Princeton University Press, 1973).

<sup>488</sup> White, *Art and Architecture in Italy: 1250-1400*, pp. 154, 193. The stained glass window is 30 metres square and Duccio used slender lines of grey paint to detail features of faces, draperies etc. on the glass, a device known as *grisaille*.

position above the altar, it must have had the capacity to transmit a kaleidoscope of glowing colours into the cathedral (Plate 23).<sup>489</sup> It is unsurprising that this colourful art form, with its own mystery, became fashionable. Subsequently, a wealth of stained glass windows was installed during the fourteenth and fifteenth centuries in rose windows and other windows across the breadth of Italy, including in Milan and Cortona.<sup>490</sup> In Florence, examples include thirty in the cathedral, twenty-five in the Biblioteca Laurenziana and seventeen in the church of Orsanmichele. Virginia Chieffo Raguin contends that it was planned to use stained glass to impart the chosen religious themes from the outset of work on rebuilding the Florentine cathedral, rather than the media of sculpture or fresco.<sup>491</sup>

Whilst the result of this patronage may have had an adverse effect on the commissioning of mosaic art, the action of one powerful patron illustrates the impact that one project for stained glass could have on mosaic. Lorenzo de' Medici is thought to have taken an active part in the design for stained glass for the Florentine church of Santa Maria delle Carceri, at the same time as his scheme to cover the interior of the cathedral's dome failed to materialise."<sup>492</sup>

Tastes for "old" art forms or materials can sometimes become widely valued, if endorsed by scholars and leading members of society and collectors.<sup>493</sup> It has already been shown that fifteenth-century patrons valued clay and that antique styles of architectural embellishment, such as classical pillars and tabernacles, became popular amongst patrons from the fourteenth century onwards. An "older" medium that may have challenged the use of mosaic was sculpture. In Pisa, Pistoia and Prato its use may

---

<sup>489</sup> Richard Glazier, *A manual of historic ornament: treating upon the evolution, tradition, and development of architecture and the applied arts* (London: Batsford, 1923), pp.117-120 explain the methods of making stained glass.

<sup>490</sup> Paul Williamson, *Medieval and Renaissance Stained Glass in the Victoria and Albert Museum* (London: V and A Publications, 2003), pp. 144, 154.

<sup>491</sup> Virginia Chieffo Raguin, *The History of Stained Glass, the art of light medieval to contemporary* (London: Thames and Hudson, 2003), p. 106.

<sup>492</sup> Alison Luchs, 'Stained Glass above Renaissance Altars: Figural Windows in Italian Church Architecture from Brunelleschi to Bramante', *Zeitschrift für Kunstgeschichte*, p. 222. Lorenzo de' Medici is thought to have taken an active part in the design for stained glass for Santa Maria delle Carceri at the same time as his scheme to cover the interior of the Cathedral's dome failed to materialise.

<sup>493</sup> Haskell, *Rediscoveries in Art, Some aspects of Taste, Fashion and Collecting in England and France*, p.7

be explained by the cities' proximity to Carrara, renowned for its high-quality marble, but perhaps also by the collection of ancient sculpture, especially Greco-Roman sarcophagi that was held in Pisa and which may have inspired the art of sculpture in northern Tuscany.<sup>494</sup> The existence of a sculptural workshop operated by the Pisano family may also have been significant. Not only was the facade of Pisa's cathedral decorated with four tiers of columned loggias in white marble in the late-thirteenth century, but it was later surmounted with statues of the Virgin and Child and angels from the Pisano workshop (Plate 24).<sup>495</sup> Meanwhile, Giovanni Pisano created a sculpturally intricate pulpit for inside the cathedral and then travelled south to Siena where he replaced the original plain masonry facade with extensive sculptural decoration.<sup>496</sup> Thus both the Pisan and Sienese cathedrals provide examples of the many buildings in Italy that were extensively decorated with sculpture in the late-thirteenth and fourteenth centuries, rather than the alternative medium of mosaic.

## Conclusion

In the late-thirteenth century, mosaics had been the popes' medium of choice. Nicholas IV had been a considerable patron of the art in Rome. But the art form was also widely commissioned at that time by the guilds in Florence and the procurators at basilica of San Marco in Venice. But after the start of the fourteenth century, mosaic faced many challenges: the withdrawal of patronage by popes and cardinals in residence in France; the emergence of newly-rich patrons with different tastes; the spirit of humanism that encouraged secular and mythological iconographies, classical styles and realistic landscapes; the rise of the mendicant orders and their preference for Gothic architecture that effectively led to the loss of the traditional sites for mosaic; the vast numbers of funeral chapels as a consequence of recurrent plagues;

---

<sup>494</sup> White, *Art and Architecture in Italy: 1250-1400*, p. 54. This collection is now held in the Camposanto, itself a building of the late thirteenth century that exhibits how marble could be used to create elegant and delicate arcading.

<sup>495</sup> The facade was constructed and sculpted by Rainaldo. It provided a model for many other churches in northern Tuscany, for example at Pistoia and Prato.

<sup>496</sup> Malafarina, *Il Duomo di Pisa*, pp. 26, 27 and 93. See also Carli, *Siena Cathedral and the Cathedral Museum*, p. 9.

the arrival of new media on the artistic scene; and particularly, the successful and speedier way in which fresco seemed to fulfil patrons' aspirations.

We see evidence of mosaic art attempting to make small adjustments to cope with these challenges and the early-sixteenth century mosaic of San Zenobius and the Venetians' use of painterly techniques such as *contrapposto* are perhaps examples. But the changes in the ways in which people thought and wanted to organise their societies generally presented too many challenges for mosaic art to overcome, and the decline in demand for the medium was an inevitable outcome. The demand for mosaics though did not entirely disappear. Patrons continued to commission mosaics in a small number of places, principally in the Venetian basilica of San Marco, where there seems to have been a strong commitment to respecting and developing its mosaic heritage. Venice was not alone in respecting the art form. Although some mosaics may have been bricked or plastered over in the baroque period, the majority of the large apse and facade mosaics of the late thirteenth century that are known about in Venice, Pisa, Rome, Naples, Lucca and Florence are still in situ.

## Conclusion

My thesis started from the point that very little seems to be known about the use and extent of mosaic in Italy between the late Middle Ages and the Renaissance. These are matters that have not figured in the scholarly literature of Italian art that cover the period. The thesis therefore explored the question of how many mosaics were made in Italy between 1270 and 1529 and placed that information within the wider context of where mosaics were made, how they were made, what images they showed and what could be found out about both the artists who made them, and their patrons.

Two databases are presented in the thesis, both of which provide new information and underpin the first four chapters. One database contains details about the one hundred and twelve mosaics that are known to have been created in Italy between 1270 and 1529, though it is undoubtedly an understatement of the actual number. The other database provides information about the one hundred and six mosaicists who are known to have worked with the medium, but again, this is an understatement because of the existence of “schools” or workshops of anonymous mosaicists. This is the first time that such comprehensive data collections have been attempted and in its completed form, the databases provide essential information for this study, as well as valuable resources for future scholars.

What has emerged is that the art of mosaic had a varied history during the period between 1270 and 1529. Most of the one hundred and twelve mosaics were installed between the late-thirteenth century and the early-fourteenth century. These mosaics were not installed solely into Roman churches but far more widely than may have been thought, namely in eight Tuscan and Umbrian cities, in Venice, Naples and on the island of Sicily.

There appears to have been no abrupt cessation to the practice of mosaic art after the early-fourteenth century. Rather, between the early-fourteenth century and mid-fifteenth century, the art remained vibrant in Orvieto when the facade of the cathedral was decorated extensively with mosaic. Meanwhile in Venice, the Baptistery’s fresco



decoration was replaced with mosaic, and the ceiling and walls of a newly-built chapel were covered with mosaic scenes. However, the database suggests that little other mosaic work was completed anywhere else in Italy for approximately a century and a half.

After the middle of the fifteenth century, however, it appears that the demand for mosaic art recovered slightly. Two major mosaic projects in Rome were completed, work continued in the Venetian basilica of San Marco and some minor decorative work was carried out in Florence. Had Lorenzo de' Medici's project to decorate the chapel of San Zenobius in the Florentine cathedral with mosaic come to fruition, then this would have constituted a major mosaic commission and made the recovery of mosaic art more pronounced.

Importantly, the databases revealed trends other than numerical ones. For instance, they informed the thesis about the patronage of mosaic art and showed that the church was not the only patron of mosaic art, although popes and cardinals were significant commissioners of the media, especially in the late-thirteenth century. Laymen who sat on guild committees in Florence and lay procurators of the Venetian basilica of San Marco made numerous major commissions of mosaic. All groups of patron were shown to have been either wealthy in their own right, or to have had access to the wealth of the church or a guild. But as the patronage of mosaic in the late Middle Ages and the Renaissance has not been studied before, this information is a useful addition to the history of mosaics.

There is no doubt that the art of mosaic faced difficulties after 1300. The methods of making glass for the thousands of small tesserae that were needed for one mosaic were inefficient, and they had probably barely changed since the fifth century. There were two important consequences: the probability that mosaic art was very expensive; and the length of time it would have taken to create a mosaic. There have been no previous studies of the economics of mosaic art and the assumptions made in this thesis about its cost remain the best comment about the issue that currently exists. Although I argued that it is unlikely that patrons were deterred from commissioning the medium because of its costliness, the time factor may have encouraged patrons to

commission the quicker medium of fresco. This seemed to be a practical response, given the hundreds of side chapels that were built in the fourteenth and fifteenth centuries, and in need of decoration.

The second database provides information about the men who made mosaics in Italy between 1270 and 1529. This forms the first set of comprehensive information about an occupational group of artists who, to date, have remained largely obscure. However, an analysis of the database revealed that these men did not form a homogenous group of workers. Some mosaicists, such as those at Orvieto in the fourteenth century, engaged with all the processes from making their own glass, through to embedding the tesserae on a wall to form a mosaic. Other mosaicists, who were principally painters, probably designed mosaics and drew cartoons, but worked with glass tesserae made elsewhere by skilled workmen. And yet other mosaicists, principally in Venice from the mid-fifteenth century onwards, embedded tesserae following designs and cartoons drawn by prominent painters who were much sought after by patrons. Other issues related to mosaicists are discussed, including the extent to which they travelled around Italy looking for work, or transferred to working in other media, though these responses seem to have depended on the city wherein they lived, and the time at which they worked.

The database of mosaics allowed the iconography of mosaics produced between the end of the thirteenth century and the beginning of the sixteenth century to be analysed. This made it clear that the iconography of mosaics changed dramatically between the late-thirteenth century and the early-sixteenth century. The early part of the period saw largely standard images of Christ that made Him instantly recognisable, were monumental in scale and set Him against golden backgrounds. In contrast, by the early-sixteenth century, mosaics tended to be small and feature locally revered saints, Fathers of the Church and designs of foliage.

The reasons for these iconographical changes seem to have rested primarily on changes to the architectural style of new churches. Whilst the older Romanesque style provided rounded, windowless apses and facades so suited to large, monumental images of Christ, and the Virgin and saints, the newer Gothic style filled the apse and

facades with rose windows and in effect, eliminated these traditional spaces for mosaic decoration and the monumental images of characters that were fundamental to the Christian faith.

The connection between the Mendicant Orders and mosaic art also seems to have been a significant matter. Light-filled, Gothic buildings were largely commissioned by the Mendicant Orders, who put an emphasis on the visibility of the preacher in the pulpit, but as previously mentioned, Gothic architecture was not nearly as suited to mosaic decoration as the older Romanesque style. Furthermore, the Mendicant Orders' attachment to notions of poverty did not usually equate with opulent mosaics and all their new Gothic churches such as Santa Croce in Florence, San Francesco in Assisi and the Venetian church of Santa Maria Gloriosa dei Frari were decorated with fresco.

Although the art of mosaic continued to be practised during the late Middle Ages and Renaissance, overall, the demand for mosaics appears to have declined during the period. It is not easy to tease out the reasons for this but given that popes and cardinals had been considerable patrons of the medium before 1300, the political consequences of the French rise to power in the papal court and its subsequent removal to France in 1304 was shown to be a significant reason. The French popes' failure to commission mosaic art from Avignon and the papal court's lack of patronage of mosaics after its return to Rome in 1417, suggests that other factors such as changes in cultural and philosophical ideas in Italy were highly significant. Fifteenth-century humanist popes and cardinals showed a preference for fresco, perhaps because it seemed better able to reflect the matters that humanists valued. These included perspective, realism and a God who possessed feelings and engaged with human beings, rather than the remote images of the deity conveyed by the late-thirteenth mosaics.

Other possible reasons for the overall decline in demand for mosaic art included the emergence of a new, wealthy class of patron with a manufacturing or merchant background in the fourteenth century. Although their role in the history of fresco has been previously and extensively studied, their negative impact on mosaic art has not

been discussed to date. This new class of patron had no history of commissioning mosaic art and is not ever known to have commissioned mosaic. Fresco was their preferred medium, perhaps in part because of the speed with which it could be used to decorate the hundreds of new funeral chapels that they built after the plagues of the fourteenth century. Also, competing for patrons' attention was the range of new media that emerged in the fifteenth century, including intarsia and ceramics, for example. Patrons' newly emerging tastes for older media, such as sculpture and bronze doors with humanist inspired classical allusions also cannot be overlooked.

By means of the databases, the thesis provides numerical and factual evidence about the course of mosaic art in Italy in the period that led up to, and embraced the Renaissance. But it goes further than this. It supplies a context in which to set this new information and in so doing, extends what is now known about the medium, thereby suggesting that mosaic warrants a place in the histories of Italian art during the late Middle Ages and Renaissance.

## Bibliography

- Ames-Lewis, Francis (ed), *Artistic Centers of the Italian Renaissance, Florence* (Cambridge: Cambridge University Press, 2012).
- Ames-Lewis, Francis, *The Intellectual Life of the Early Renaissance Artist* (New Haven: Yale University Press, 2000).
- Ames-Lewis, Francis and Mary Rogers (eds), *Concepts of Beauty in Renaissance Art* (Aldershot: Ashgate, 1998).
- Angeli, Fabrizio Alessio and Elizabeth Berti, 'Chiese Medioevale di Roma', [http://www.medioevo.roma.it/Chiese di Roma\\_001.pdf](http://www.medioevo.roma.it/Chiese_di_Roma_001.pdf) [accessed 9 January 2016].
- Ashtor, Eliyahu, 'The Factors of Technological and Industrial Progress in the Later Middle Ages', *The Journal of European Economic History*, Vol. 18, No. 1, 1989, pp. 7-36.
- Ashtor, Eliyahu and Guidobaldo Ceviddali, 'Levantine Alkali Ashes and European Industries', *The Journal of European Economic History*, Vol. 12, No. 3, 1983, pp. 475-522.
- Baedeker, Karl (ed), *Central Italy and Rome*, 15<sup>th</sup> ed. (New York: Charles Scribner's Sons, 1909).
- Baedefer, Karl (ed), *Northern Italy*, 13<sup>th</sup> ed. (Leipzig: Karl Baedeker, Publisher, 1906).
- Baedeker Karl (ed), *Southern Italy and Sicily* (London: T. Fisher Unwin, 1912).
- Balass, Golda, *Taddeo Zuccaro's Fresco in the Apse-Conch in S. Sabina, Rome* (Tel Aviv University, Ph.D. thesis, 1999).
- 'Basilica di S. Croce in Gerusalemme', *Fondazione Federico Zeri, Università di Bologna*, [http://catalogo.fondazionezeri.unibo.it/ricerca.jsp?mod\\_LDCN\\_OA=contiene&componi\\_OA=AND&apply=true&LDCN\\_OA=Basilica+di+S.+Croce+in+Gerusalemme&decorator=layout\\_S2&tipo\\_ricerca=avanzata&ordine\\_OA=rilevanza&percorso\\_ricerca=OA&pagina=3](http://catalogo.fondazionezeri.unibo.it/ricerca.jsp?mod_LDCN_OA=contiene&componi_OA=AND&apply=true&LDCN_OA=Basilica+di+S.+Croce+in+Gerusalemme&decorator=layout_S2&tipo_ricerca=avanzata&ordine_OA=rilevanza&percorso_ricerca=OA&pagina=3) [accessed 9 January 2016].
- Bellato, Franco, *The Cathedral of San Martino in Lucca*, trans. by Giuntini Maria (Lucca: Edizioni Cattedrale di San Martino, 2006).
- Bellato, Franco, *La Basilica e Il Monastero di San Frediano in Lucca* (Lucca: Edizioni Basilica di San Frediano, 1998).
- Bellieni, Andrea, 'The Museo Correr', trans. by David Graham, in *The Great Art Collections*, ed by Giandomenico Romanelli (Venice: Marsilio, 2010).
- Belloso, Luciano, *Cimabue*, trans. by Frank Dabell, Alexandra Bonfante-Warren and Jay Hyams (New York: Beville Publishing Group, 1998).
- Belloso, Luciano, *The Sheep of Giotto* (Turin: Scala Group, 1985).
- Belting, Hans, *Likeness and Presence: A History of the Image before the Era of Art* (Chicago: University of Chicago Press, 1994).
- Berenson, Bernard, *Italian Pictures of the Renaissance*, Vol. 2 (England: Phaidon Press Ltd, 1957).
- Bertani, Licia, *San Miniato Al Monte* (Rome: Becocchi Editore, 2010).
- Bertarelli, L. V., *Italia Centrale*, 2<sup>nd</sup> ed. from the series 'Guida D'Italia del Touring Club Italiano' (Milan: Touring Club Italiano, 1929).
- Blackwell, John Victor, *An Historical catalogue of Italian, French and German Romanesque Architecture and Sculpture*, Ph.D thesis, University of Iowa, 1957.
- Borgia, Claudia, 'Mosaics and Gilded Glass in Franciscan Hands: Professional Friars in Thirteenth and Fourteenth Century Italy', *Harlaxton Medieval Studies XX11E*, proceedings of the 2010 Harlaxton Symposium (2012), pp. 141-166.
- Borsook, Eve, *The Companion Guide to Florence*, 6<sup>th</sup> ed. (Woodbridge: Boydell and Brewer, 1977).
- Borsook, Eve, *Messages in Mosaic* (Woodbridge: The Boydell Press, 1990).
- Borsook, Eve, 'Rhetoric or Reality: Mosaics as Expressions of a Metaphysical Idea', *Mitteilungen des Kunsthistorischen Institutes in Florenz*, No. 44, 2000, pp. 2-18.

- Borsook, Eve, Fiorella Gioffredi Superbi and Giovanni Pagliarulo (eds), *Medieval Mosaics* (Milan: Silvana Editoriale, 2000).
- Boskovits, Miklos, *Coppo Di Marcovaldo (Coppus Alarcoaldi)* (Istituto della Enciclopedia Italiana), <http://www.treccani.it/enciclopedia/coppo-di-marcovaldo> [accessed 9 January 2016].
- Bourdua, Louise, *The Franciscans and Art Patronage in Late Medieval Italy* (Cambridge: Cambridge University Press, 2004).
- Bowsky, William M. (ed), *The Black Death, A Turning Point in History* (New York: Holt, Rinehart and Winston, 1971).
- Brandenburg, Hugo, *Ancient Churches of Rome from the Fourth to the Seventh Century - the Dawn of Christian Architecture in the West* (Turnhout, Belgium: Brepols Publishers, 2004).
- Branner, Robert, *Gothic Architecture* (London: Prentice-Hall International, 1961).
- Brown, Alison, 'A Contract for Ridolfo Ghirlandaio's Pieta in S. Agostino, Colle Val d'Elsa', *Burlington Magazine*, No. 125, 1983, pp. 692-93.
- Brown, Patricia Fortini, *The Renaissance in Venice, a World Apart* (London: George Weidenfeld and Nicolson Ltd, 1997).
- Brown, Patricia Fortini, *Venice and Antiquity, the Venetian Sense of the Past* (New Haven: Yale University Press, 1996).
- Brucker, Gene, *Renaissance Florence* (Los Angeles: University of California Press, 1983).
- Bruzellius, Caroline, *Preaching, Building, and Burying, Friars in the Medieval City* (New Haven: Yale University Press, 2014).
- Bryan, Michael, *Dictionary of Painters and Engravers, Biographical and Critical*, Vol. 1, (London: George Bell and Sons, 1886).
- Burke, Jill, "Republican Florence and the Arts, 1494-1513", in *Artistic Centres of the Italian Renaissance, Florence* ed by Francis Ames-Lewis (New York: Cambridge University Press, 2012).
- Burresi, Mariagiulia and Antonio Caleca, *Cimabue a Pisa* (Pisa: Pacinieditore, 2005).
- Bussagli, Marco (ed), *Rome, Art and Architecture* (Cologne: Konemann, 1999).
- Cadogan, Jean, *Domenico Ghirlandaio: Artist and Artisan* (New Haven: Yale University Press, 2000).
- Campbell, Gordon (ed), *The Grove Encyclopaedia of Decorative Arts* (Oxford: Oxford University Press, 2006).
- Cannon, Joanna, 'Giotto e Il Trecento, Roma' in *Giotto e il Trecento*, ed by Alessandro Tomei (Milan: 2009).
- Cannon, Joanna, *Religious Poverty, Visual Riches* (New Haven: Yale University Press, 2013).
- Caravaggi, Roberto (ed), *The Patriarchal Basilica in Venice, San Marco, the Mosaics, the History, the Lighting*, Vol. 1 (Milan: Gruppo Editoriale Fabbri, 1990).
- Caravaggi, Roberto (ed), *The Patriarchal Basilica in Venice, San Marco, the Mosaics, the Inscriptions, the Pala d'Oro*, Vol. 2 (Milan: Gruppo Editoriale Fabbri, 1991).
- Carli, Enzo, *Siena Cathedral and the Cathedral Museum* (Florence: Scala, 1999).
- Cavalieri, Marco, 'Lombardic Glassworking in Tuscany', *Materials and Manufacturing Processes*, Vol. 24, No. 9, 2009, pp. 1023-32.
- Cempanari, Mario, *Sancta Sanctorum Lateranense*, Vol. 1 (Rome: Tipografia Città Nuova della P.A.M.O.M., 2003).
- Cesati, Franco, *The Medici, Story of a European Dynasty*, trans. by Christina Caughlan (Florence: Mandragora s.r.l., 1999).
- Charleston, Robert, 'Glass Furnaces through the Ages', *Journal of Glass Studies*, Vol. 20, 1978, pp. 9-44.
- Chastel, Andre, *Arte e Umanesimo a Firenze al Tempo di Lorenzo Il Magnifico*, (Torino: Einaudi, 1964).

- Chilvers, Ian (ed), *Oxford Dictionary of Art and Artists* (Oxford: Oxford University Press, 2009).
- CIDM, Centro Internazionale di Documentazione sul Mosaico, Ravenna,  
<http://www.mosaicoravenna.it> [accessed 9 January 2016].
- Cohn, Samuel K., *The Cult of Remembrance and the Black Death: Six Renaissance Cities in Central Italy*, (Baltimore and London: John Hopkins University Press, 1997).
- Cole, Bruce, *Agnolo Gaddi*, (Oxford: Clarendon Press, 1977).
- Cooper, Donal and Janet Robson, *The Making of Assisi* (New Haven: Yale University Press, 2013).
- Coor-Achenbach, Gertrude, 'The Earliest Italian Representations of the Coronation of the Virgin', *Burlington Magazine*, Vol. 99, No. 655, 1957, pp. 328-332.
- Crum, Roger, J., 'The Florence of Cosimo 'Il Vecchio' de' Medici: within and beyond the walls', in *Artistic Centres of the Italian Renaissance, Florence* ed by Francis Ames-Lewis (New York: Cambridge University Press, 2012).
- Cunningham, Mary, *Faith in the Byzantine World*, (Oxford: Lion Publishing, 2002).
- D'Alberto, Claudia, 'Arte Come Strumento di Propaganda: Il Mosaico di Santa Maria del Principio nel Duomo di Napoli', *Arte Medievale*, 2008, pp. 105-23.
- D'Antuono, Andrea, *Amalfi e la Sua Cattedrale*, (Salerno: De Luca Editore, 2004).
- Davies, Gerald S., *Ghirlandaio*, 2<sup>nd</sup> ed. (London: Methuen, 1908).
- Davison, Sandra, *Conservation and Restoration of Glass*, 2<sup>nd</sup> ed. (Oxford: Butterworth Heinemann, 2003).
- DeLaine, Janet, 'Design and Construction in Roman Imperial Architecture, the Baths of Caracalla in Rome', University of Adelaide, Ph.D. thesis, 1993.
- Demus, Otto, *Byzantine Mosaic Decoration: Aspects of Monumental Art in Byzantium* (London: Routledge and Kegan Paul Ltd, 1953).
- Demus, Otto, *The Mosaic Decoration of San Marco, Venice* (Washington: Chicago University Press for Dumbarton Oaks, 1988).
- torischen
- Demus, Otto, *The Mosaics of San Marco in Venice*, Vol. 1 (text) (Chicago: University of Chicago Press, 1984).
- Demus, Otto, *The Mosaics of San Marco in Venice*, Vol. 2 (text) (Chicago: University of Chicago Press, 1984).
- 'Document 00202001.233vg', *Opera di Santa Maria del Fiore*,  
<http://archivio.operaduomo.fi.it/cupola/ENG/HTML/S021/C437/T007/TBLOCK00.HTM>  
 [accessed 9 January 2016].
- 'Document 00204013.056a', *Opera di Santa Maria del Fiore*,  
<http://archivio.operaduomo.fi.it/cupola/ENG/HTML/S027/C110/T001/TBLOCK00.HTM>  
 [accessed 9 January 2016].
- 'Domenico Ghirlandaio', *Web Gallery of Art*,  
[http://www.wga.hu/html\\_m/g/ghirland/domenico/7panel/12mosaic.html](http://www.wga.hu/html_m/g/ghirland/domenico/7panel/12mosaic.html) [accessed 9 January 2016].
- 'Duccio Di Buoninsegna', <http://www.ducciodiboninsegna.org> [accessed 9 January 2016].
- Duffy, Eamon, *Saints and Sinners: A History of the Popes* (New Haven: Yale University Press, 2014).
- Edgcombe, Stanley, *The Guilds of Florence* (New York: Benjamin Blom, 1967).
- Elam, Caroline, 'Lorenzo de' Medici's Sculpture Garden' in *Mitteilungen des Kunsthistorischen Institutes in Florenz*, Vol.36, (1/2), pp.41-84.
- Ferguson, Wallace K., *Europe in Transition, 1300-1520* (Boston: Houghton Mifflin, 1962).
- Franceschi Franco, 'The Economy: work and wealth' in *Italy in the Age of the Renaissance, 1300-1550*, ed by John Najemy (Oxford: Oxford University Press, 2004).
- Filippi, Giovanni, *L'arte dei Mercanti di Calimala in Firenze* (Torino: Fratelli Bocca Editori, 1889).

- Fondazione Federico Zeri, University of Bologna, <http://www.fondazionezeri.unibo.it> [accessed January 2016].
- Francovich, Geza de, 'Lorenzo Maitani: Scultori e i Bassorilevi della Facciata del Duomo di Orvieto', *Bollettino d'Arte*, No. Gennaio, 1928.
- Fumi, Luigi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i Suoi Restauri* (Orvieto-Perugia: Deputazione di Storia Patria per l'Umbria. Fonti per la Storia dell'Umbria - N.28, 2002).
- Fusco, Laurie and Gino Corti, *Lorenzo de' Medici* (Cambridge: Cambridge University Press, 2006).
- Gardner, Julian, 'Copies of Roman Mosaics in Edinburgh', *Burlington Magazine*, Vol. 115, No. 846, 1973, pp. 583-91.
- Gardner, Julian, 'Pope Nicholas IV and the Decoration of Santa Maria Maggiore', *Zeitschrift für Kunstgeschichte*, No. 36, 1973, pp. 1-50.
- Gardner, Julian, *The Roman Crucible: The Artistic Patronage of the Papacy 1198-1304* (Munich: Hirmer Verlag Munchen, 2013).
- Gardner, Julian, 'San Paolo Fuori le Mura, Nicholas III and Pietro Cavallini', *Zeitschrift für Kunstgeschichte*, Vol. 34, No. 3, 1971, pp. 240-48.
- Gerard, Alexander, *An Essay on Taste* (New York: Garland Publishing Inc., 1970).
- Gerlini, Elsa, *La Villa Farnesina alla Lungara* in the series 'Guides to Italian Museums, Galleries and Monuments', 3<sup>rd</sup> ed. (Rome: Istituto Poligrafico e Zecca dello Stato, 2006).
- Gill, Meredith J., "The Fourteenth and Fifteenth Centuries" in *Artistic Centres of the Italian Renaissance, Rome*, ed by Marcia Hall (New York: Cambridge University Press, 2005).
- Giorgi, Giorgio and Nicolai Umberto, *Le Tre Basiliche di S. Frediano, Nella Storia e Nell'Arte* (Lucca: Maria Pacini Fazzi Editore, 1998).
- Glazier, Richard, *A Manual of Historic Ornament. Treating upon the evolution, tradition, and development of architecture and the applied arts* (London: Batsford, 1923).
- Goldthwaite, Richard, *The Building of Renaissance Florence* (Baltimore: The John Hopkins University Press, 1980).
- Goldthwaite, Richard, *Banks, Palaces and Entrepreneurs in Renaissance Florence* (Aldershot: Ashgate, 1995).
- Goldthwaite, Richard, *Wealth and the Demand for Art in Italy* (Baltimore: The John Hopkins University Press, 1993).
- Gunn, Peter, *A Companion Guide to Southern Italy* (London: Collins, 1969).
- Hall, Marcia (ed), *Artistic Centers of the Italian Renaissance, Rome* (New York: Cambridge University Press, 2005).
- Han, Verena and Luigi Zecchin, 'Presenze Balcaniche a Murano e Presenze Muranesi nei Balcani' *Balcanica*, Vol. 5, 1957, pp. 77- 97.
- Harding, Catherine, 'Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio', University of London, Ph.D. thesis, 1983.
- Harding, Catherine, 'Images of Authority, Identity, Power: Facade Mosaics Decoration in Rome during the Later Middle Ages' *RACAR (Canadian Art Review)*, Vol. XXIV, No. 1, 1997, pp. 15-27.
- Harding, Catherine, 'The Production of Medieval Mosaics: The Orvieto Evidence', *Dumbarton Oaks Papers*, No. 43, 1989, pp. 73-102.
- Hartt, Frederick, 'The Earliest Works of Andrea Del Castagno', *The Art Bulletin, College Art Association*, 1959, pp. 159 - 81.
- Hartt, Frederick and David G. Wilkins, *History of Italian Renaissance Art*, 5<sup>th</sup> ed. (New York: Harry N. Abrams, 2003).
- Haskell, Francis, *Rediscoveries in Art, Some Aspects of Taste, Fashion and Collecting in England and France* (Oxford: Phaidon, 1980).



- Henkels, H., 'Remarks on the Late 13th Century Apse Decoration in Santa Maria Maggiore', *Simiolus: Netherlands Quarterly for the History of Art*, Vol. 4, No. 3, 1971, pp. 128-49.
- Herlihy, David, *The Black Death and the Transformation of the West* (Cambridge, Massachusetts and London: Harvard University Press, 1997).
- Hetherington, Paul, *Medieval Rome* (London: The Rubicon Press, 1994).
- Hetherington, Paul, *Medieval Rome: a Portrait of the City and Its Life* (London: The Rubicon Press, 1994).
- Hetherington, Paul, 'Pietro Cavallini, Artistic Style and Patronage in Late Medieval Rome', *The Burlington Magazine* Vol. 114, No. 826, 1972, pp. 4-10.
- Hetherington, Paul, *Pietro Cavallini: A Study in the Art of Late Medieval Rome* (Isleworth: Sagittarius Press, 1979).
- Hetherington, Paul, *The Greek islands. Guide to the Byzantine and Medieval Buildings and their Art* (London: Quiller Press, 2001)
- Hills, Helen, "The face is the mirror of the soul": Frontispieces and the production of sanctity in post-Tridentine Naples" in *Art and Architecture in Naples*, ed by Cordelia Warr and Janis Elliott (Chichester: Wiley-Blackwell, 2010).
- Hills, Paul, "Venetian Glass and Renaissance self-fashioning", in *Concepts of Beauty in Renaissance Art*, ed by Francis Ames-Lewis and Mary Rogers (Aldershot: Ashgate, 1998).
- Hills, Paul, *Venetian Colour* (New Haven: Yale University Press, 1999).
- Holmes, George, *Florence, Rome and the Origins of the Renaissance* (Oxford: Clarendon Press, 1986).
- Holmes, Megan, *Fra Filippo Lippi* (New Haven: Yale University Press, 1999).
- Holmes, Megan, *The Miraculous Image in Renaissance Florence* (New Haven: Yale University Press, 2013).
- Hook, Judith, *Lorenzo de' Medici* (London: Hamish Hamilton, 1984).
- Horster, Marita, *Andrea del Castagno* (Oxford: Phaidon Press, 1980).
- Hourihane, Colum (ed), *The Grove Encyclopaedia of Medieval Art and Architecture* (New York: Oxford University Press, 2012).
- ICCD, Istituto Centrali per il Catalogo e la Documentazione for Sicily, <http://www.iccd.beniculturali.it> [accessed 9 January 2016].
- 'Itinerari Culturali del Medioevo Siciliano, le Opere Pittoriche e Musive: Mosaici', *Istituto centrale per il catalogo e la documentazione*, <http://www.iccd.Beniculturali.it/medioevosiciliano/index.php?it/128/mosaici> [accessed 9 January 2016].
- Jacoby, David, 'Raw Materials for the Glass Industries of Venice and the Terraferma, about 1370 - about 1460', *Journal of Glass Studies*, Vol. 35, 1993, pp. 65-90.
- James, Liz, 'Byzantine Glass Mosaic Tesserae: Some Material Considerations', *Byzantine and Modern Greek Studies*, Vol. 30, No. 1, 2006, pp. 29-47.
- Kempers, Bram and Sible De Blaauw, 'Jacopo Stefaneschi, Patron and Liturgist. A New Hypothesis Regarding the Date, Iconography, Authorship and Function of His Altarpiece for Old Saint Peter's', *Mededelingen van het Nederlands Instituut te Rome*, Vol. 12, No. 47, 1987, pp. 83-113.
- Kennedy, Ruth Wedgwood, *Alesso Baldovinetti. A Critical and Historical Study* (New Haven: Yale University Press, 1938).
- Kent, Francis W., "Florence, 1300-1600", in *Artistic Centres of the Italian Renaissance, Florence* ed by Francis Ames-Lewis (New York: Cambridge University Press, 2012).
- Kent, F. W., *Lorenzo de' Medici* (Baltimore: The John Hopkins University Press, 2004).
- Kessler, Herbert L. and Johanna Zacharias, *Rome 1300, on the Path of the Pilgrim*, (New Haven: Yale University Press, 2000).

- Kessler, Herbert L (ed), *The Mosaic Decoration of San Marco, Venice* (Chicago: The University of Chicago Press, 1988).
- Krautheimer, Richard, *Rome, Profile of a City, 312-1308* (New Jersey: Princeton University Press, 1980).
- Levey, Michael, *Florence* (London: Jonathan Cape, 1996).
- Lillie, Amanda, *Florentine Villas in the Fifteenth Century* (Cambridge: Cambridge University Press, 2005).
- Londi, Emilio, *Alesso Baldinovetti, Pittore Fiorentino con Laggiunta dei Suoi Ricordi* (Florence: Alfani e Venturi, 1907).
- Lucherini, Vinni, '1313-1320: Il Cosiddetto Lello da Orvieto, Mosaicista e Pittore, a Napoli, Tra Committenza e Episcopale e Committenza Canonica', in *El Trecento en Obres: Art de Catalunya i Art D'Europa al Segle XIV*, ed. by Rosa Alcoy (Barcelona: Grup d'Investigacio Emac, 2009).
- Luchinat, Cristina Acidini, *Renaissance Florence, the Age of Lorenzo de' Medici* (Milan: Edizioni Charta, 1992).
- Luchs, Alison, 'Stained Glass above Renaissance Altars: Figural Windows in Italian Church Architecture from Brunelleschi to Bramante', *Zeitschrift für Kunstgeschichte*, No. 48, 1985, pp. 177-224.
- Luzzatto, Gino, *An Economic History of Italy from the Fall of Rome to the Beginning of the Sixteenth Century*, trans. by Philip Jones (London: Routledge and Kegan Paul, 2006).
- Lymberopoulou, Angeliki and Rembrandt Duits (eds), *Byzantine Art and Renaissance Europe* (Farnham: Ashgate, 2013).
- Magro, Pasquale, *Assisi, History, Art, Spirituality*, trans. by Peter Massengill (Assisi: Casa Editrice Francescana, 1982).
- Maguire, Henry, "Signs and Symbols of your always victorious reign", *Images of the Byzantine World. Visions, Messages and Meanings*, ed. Angeliki Lymberopoulou (Abingdon: Routledge, 2011).
- Maguire, Henry and Robert S. Nelson (eds), *San Marco, Byzantium and the Myths of Venice* (Washington: Dumbarton Oaks Research Library and Collection, 2010).
- Malafarina, Gianfranco (ed), *Il Duomo di Pisa* (Modena: Franco Cosimo Panini Editore, 2007).
- Malmstrom, Ronald S., *Maria in Aracoeli at Rome* (New York: New York University, 1973).
- Marchei, Cristina, *S. Maria in Trastevere* (Milan: Silvana Editoriale, 1999).
- Martin, John and Dennis Romano (eds), *Venice Reconsidered, the History and Civilisation of an Italian City-State, 1297-1797* (Baltimore: The John Hopkins University Press, 2000).
- Masson, Georgina, *Italian Gardens* (Woodbridge: ACC Publishing Group, 2011).
- Matthiae, Guglielmo, *Mosaici Medioevali delle Chiese di Roma*, Vol. 1 (Roma: Istituto Poligrafico dello Stato, 1967).
- McCray, W. Patrick, *Glassmaking in Renaissance Venice - the Fragile Craft* (Aldershot: Ashgate, 1999).
- McHam, Sarah Blake, *Pliny and the Artistic Culture of the Italian Renaissance* (New Haven: Yale University Press, 2013).
- Mendera, Marja, "Produzione Vitrea Medievale in Italia e Fabbricazione di Tesere Musive", in *Medieval Mosaics*, ed by Eve Borsook, Fiorella Gioffredi Superbi and Giovanni Pagliarulo (Milan: Silvana Editoriale, 2000).
- 'Messina', *Treccani la Cultura Italiana*,  
[http://www.treccani.it/enciclopedia/messina\\_\(Enciclopedia-dell'-Arte-Medievale\)/](http://www.treccani.it/enciclopedia/messina_(Enciclopedia-dell'-Arte-Medievale)/)  
 [accessed 9 January 2016].
- Michalsky, Tanja, "The Local Eye; Formal and social distinctions in late quattrocento Neapolitan tombs", in *Art and Architecture in Naples*, ed by Cordelia Warr and Janis Elliott (Chichester: Wiley-Blackwell, 2010).

- Michelin et cie (ed), *The Green Guide, Italy* (Watford, England: Michelin Travel Publications, 2000).
- Milanesi, G., 'Dell'arte Del Vetro Per Musaico: Tre Trattatelli Dei Secoli Xiv e Xv Ora Per La Prima Volta Pubblicati', *Romagnoli*, <https://ia801405.us.archive.org/24/items/dellartedelvetro00milauoft/dellartedelvetro00milauoft.pdf> [accessed 9 January 2016].
- Miller, Stephanie R. "A Material Distinction: fifteenth century tin-glazed terracotta portraits in Italy", in *Sculpture Journal*, Vol.20, No.1, 2013, pp. 7-20.
- Millunzi, Gaetano, *Il Mosaicista Maestro Pietro Oddo, Ossia Restauri e Restauratori del Duomo di Monreale, Secolo XVI* (Whitefish, Montana: Kessinger, 2000).
- Mollat, G., *The Popes at Avignon, 9<sup>th</sup> ed.*, trans. by Janet Love (London: Thomas Nelson and Sons Ltd, 1963).
- Monciatti, Alessio, 'Le Baptistere De Florence', *Revue de L'Art*, No. 120, 1988, pp. 11-22.
- Moretti, Cesare and Tullio Toninato, *Glass Recipes of the Renaissance* (Private publication by Watts Publishing, 2011).
- Mori, Gioia, "The Fifteenth Century: the Early Renaissance" in *Rome*, ed by Marco Bussagli (Cologne :Konemann, 1999).
- Mueller, Reinhold C., *The Venetian Money Market, Banks, Panics, and the Public Debt, 1200-1500*, (Baltimore: Johns Hopkins University Press, 1997).
- Munaretto, Gabriella and Antonio Batinti, *Parole di Vetro, Arte e Tradizioni a Piegara dal XII Sec.* (Perugia: Edizioni Era Nuova, 2007).
- Muraro, Michelangelo, 'The Statutes of the Venetian Arti and the Mosaics of the Mascoli Chapel', *The Art Bulletin*, Vol. 43, No. 4, 1961, pp. 263-274.
- Murray, Peter, *An Index of Attributions before Vasari* (Florence: Loos Olschki, 1959).
- Najemy, John (ed), *Italy in the Age of the Renaissance, 1300-1550* from the series, *The Short Oxford History of Italy*, John Davis (general ed) (Oxford: Oxford University Press, 2004).
- Nelson, Jonathan K. and Richard J. Zeckhauser, "Private Chapels in Florence: a paradise for signalers" in *The Patron's Payoff* ed by Jonathan K. Nelson and Richard J. Zeckhauser (Princeton: Princeton University Press, 2008).
- Nethersole, Scott, *Devotion by Design, Italian Altarpieces before 1500* (London: National Gallery Company Ltd, 2011).
- O'Malley, Michelle, *The Business of Art, Contracts and the Commissioning Process in Renaissance Italy* (New Haven: Yale University Press, 2005).
- O'Malley, Michelle, *Painting under Pressure* (New Haven: Yale University Press, 2013).
- Oakeshott, Walter, *The Mosaics of Rome* (London: Thames and Hudson, 1967).
- 'Palermo Cattedrale', *Touring Club Italiano*, [www.touringclub.com/chiesa/sicilia/palermo/cattedrale\\_31.aspx](http://www.touringclub.com/chiesa/sicilia/palermo/cattedrale_31.aspx) [accessed 9 January 2016].
- Panofsky, Erwin (ed), *Abbot Suger*, 2<sup>nd</sup> ed. (Princeton: Princeton University Press, 1973).
- Panzeri, Matteo, 'Automatic Indexes of Literary Sources for Art History: The Notizie by Federico Alizeri', *Historical Social Research*, Vol. 14, No. 4, 1989, pp. 10-16.
- Paolucci, Antonio (ed), *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), trans. by Barbara Fisher et al. from the *Mirabilia Italiae* Series (Modena: Franco Cosimo Panini, 1994).
- Paolucci, Antonio (ed), *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), trans. by Barbara Fisher et al. from the *Mirabilia Italiae* Series (Modena: Franco Cosimo Panini, 1994).
- Papacostas, Tassos, "The Medieval Progeny of the Holy Apostles", *The Byzantine World*, ed. P. Stephenson (Oxford: Routledge, 2012).
- Parronchi, Alessandro, *Paolo Uccello* (Bologna: Massimiliano Boni, 1974).

- Partner, Peter D., 'Camera Papae: Problems of Papal Finance in the Later Middle Ages', *The Journal of Ecclesiastical History*, Vol. 4, No. 1, 1953, pp. 55-68.
- Partridge, Loren, *The Renaissance in Rome* (London: Calmann and King Ltd, 1996).
- Pincus, Debra, "Venice and its Doge in the Grand Design: Andrea Dandolo and the Fourteenth - Century Mosaics of the Baptistry" in *San Marco, Byzantium and the Myths of Venice* ed by Henry Maguire and Robert S. Nelson (Washington: Dumbarton oaks Research Library and Collection, 2010).
- Pique, Francesca and Dusan C. Stulik (eds), *Conservation of the Last Judgement Mosaic, St. Vitus Cathedral, Prague* (Los Angeles: Getty Publications, 2004).
- Pogliani, Paola and Claudio Seccaroni (eds) *Il Mosaico Parietale* (Florence: Nardini Editore, 2010).
- Rabil Jr, Albert (ed), *Renaissance Humanism, Foundations, Forms and Legacy*, Vol. 1. (Philadelphia: University of Pennsylvania Press, 1991).
- Raguin, Virginia Chieffo, *The History of Stained Glass* (London: Thames and Hudson, 2003).
- Ramage, Nancy and Andrew Ramage, *Roman Art*, 5<sup>th</sup> ed. (New Jersey: Pearson, Prentice Hall, 2009).
- Rasmussen, Seth, 'Advances in 13th Century Glass Manufacturing and their Effect on Chemical Progress' *Bulletin of Historical Chemistry*, Vol. 33, No. 1, 2008, pp. 28-34.
- Renouard, Yves, *The Avignon Papacy 1305-1403*, trans. by Denis Bethell (Hamden, Connecticut: Archon Books, 1970).
- Richardson, Carol M. (ed), *Locating Renaissance Art*, Vol. 2 in the series Renaissance Art Reconsidered (New Haven: Yale University Press, 2007).
- Richler, George Martin, *Andrea del Castagno* (Chicago: University of Chicago Press, 1943).
- Roberts, Paul, *Life and Death in Pompeii and Herculaneum* (London: British Museum, 2013).
- Robson, Janet, "Florence before the Black Death", in *Artistic Centres of the Italian Renaissance, Florence* ed by Francis Ames-Lewis (New York: Cambridge University Press, 2012).
- Rowland, Ingrid, 'Render Unto Caesar the Things Which Are Caesar's: Humanism and the Arts in the Patronage of Agostino Chigi', *Renaissance Quarterly*, Vol. 39, No. 4, 1986, pp. 673-730.
- Ruderman, David B., "Italian Renaissance and Jewish Thought" in *Renaissance Humanism, Foundations, Forms and Legacy*, Vol. 1, ed by Albert Rabil, Jr., (Philadelphia: University of Pennsylvania Press, 1991).
- Salmi, Mario, *Paolo Uccello, Andrea Del Castagno, Domenico Veneziano*, trans. by Jean Chuzeville (Paris: Librairie Gallimard, 1939).
- Scaff, Susan von Rohr, 'The Virgin Annunciate in Italian Art of the Late Middle Ages and Renaissance' *College Literature*, Vol. 29, No. 3, 2002, pp. 109-23.
- Scalini, Mario, *Florence, the Golden Centuries* (New York: Barnes and Noble, 1999).
- Schaff, Philip, *The History of the Christian Church: The Middle Ages, AD 1294-1517*, Vol. VI (Grand Rapids, Michigan: Grand Rapids, 1932).
- Sekules, Veronica, *Medieval Art* in the series Oxford History of Art (Oxford: Oxford University Press, 2001).
- Silva, R, *La Basilica di S. Frediano in Lucca, Urbanistica, Architettura e Erredo* (Lucca: 1985).
- Spain, Susanne, 'Restorations of Sta Maria Maggiore, Rome', *The Art Bulletin*, Vol. 65, No. 2, 1983, pp. 325-328.
- Spencer, John R., *Andrea Del Castagno and His Patrons* (Durham and London: Duke University Press, 1991).
- Spufford, Peter, *Handbook of Medieval Exchange* (Offices of the Royal Historical Society, 1986).
- Spufford, Peter, *Money and its use in Medieval Europe* (Cambridge: Cambridge University Press, 1988).
- Stapleford, Richard (ed), *Lorenzo de' Medici at Home, the Inventory of the Palazzo Medici in 1492* (Pennsylvania: The Pennsylvania State University Press, 2013).

- Stiaffini, Daniela, *Il Vetro Nel Medioevo* (Rome: Fratelli Palombi Editori, 1999).
- Tafari, Manfredo, *Venice and the Renaissance*, trans. by Jessica Levine (Cambridge, Massachusetts: Massachusetts Institute of Technology, 1989).
- Taylor, Paul, "Julius and the Stanza della Segnatura", *Journal of the Warburg and Courtauld Institutes*, Vol. 72 (2009).
- Theophilus, *On Divers Arts. The Foremost Medieval Treatise on Painting, Glassmaking and Metalwork*, trans. by Cyril Stanley Smith and John G. Hawthorne (New York: Dover Publications, 1979).
- The Brancacci Chapel: form, function, and setting: acts of an international conference, Florence, I Tatti, 2003, (Florence: Olschi, 2003).
- Thomas, Anabel, *The Painter's Practice in Renaissance Tuscany* (Cambridge: Cambridge University Press, 1995).
- Toesca, Pietro, *Pietro Cavallini*, trans. by E. Andrews (London: Oldbourne Press, 1960).
- Tomei, Alessandro, "Pictorial Art from the Fifth to the Fourteenth Century", in *Rome*, ed by Marco Bussagli (Cologne: Konemann, 1999).
- Torriti, Piero, *The Cathedral of Orvieto* (Florence: Casa Editrice, No publication date).
- Trachtenberg, Marvin, "Gothic/Italian 'Gothic'. Toward a Redefinition", *Journal of the Society of Architectural Historians*, Vol.50, No.1 (1991), pp.22-37.
- Trexler, Richard, 'Florentine Religious Experience: The Sacred Image', *Journal Studies in the Renaissance*, Vol. 19, 1972, pp. 7-41.
- Tronzo, William, *Italian Church Decoration of the Middle Ages and Early Renaissance*, Vol. 1 (Bologna: Nuova Alfa Editoriale, 1989).
- University of Sussex, 'The Composition of Byzantine Glass Mosaic Tesserae', <http://www.sussex.ac.uk/byzantine/mosaics/> [accessed 9 January 2016].
- Vasari, Giorgio, *Le Vite de' Più Eccellenti Pittori, Scultori E Architettori* (Milano: 1878).
- Vasari, Giorgio, *The Lives of the Artists*, trans. by Julia and Peter Bondanella (Oxford: Oxford University Press, 1991).
- Vasari, Giorgio, *Lives of the Most Eminent Painters, Sculptors and Architects* (London: Macmillan and Co. Ltd and the Medici Society, 1912).
- Vasari, Giorgio, *Lives of the Most Eminent Painters, Sculptors and Architects*, Vol. 1, trans. by Gaston duc de Vere (London: Philip Lee Warner, publisher to the Medici Society, 1912).
- Vassilaki, Maria (ed), *Images of the Mother of God* (Aldershot: Ashgate, 2005).
- Verdier, Philippe, 'Suger a-t-il Été en France le Créateur du Theme Iconographique du Couronnement de la Vierge?', *Gesta*, Vol. 15, No. 1/2, 1976.
- Verità, Marco, "Tecniche di Fabbricazione dei Materiale Musivi Vitrei", in *Medieval Mosaics*, ed by Eve Borsook, Fiorella Gioffredi Superbi and Giovanni Pagliarulo (Milan: Silvana Editoriale, 2000)
- Verità, Marco, 'Technology and Deterioration of Vitreous Mosaic Tesserae', *Reviews in Conservation*, Vol. 1, 2000, pp. 65-76.
- Vicchi, Roberta, *The Major Basilicas of Rome* (Florence: Scala, 1999).
- Victoria and Albert Museum, (no date), [collections.vam.ac.uk/item/O93282/march-roundel-della-robbia-luca/](http://collections.vam.ac.uk/item/O93282/march-roundel-della-robbia-luca/) [accessed 23 December 2016].
- 'Vie Francigene', *Associazione Europea delle Vie Francigene*, <http://www.viefrancigene.org/en/> [accessed 9 January 2016].
- Vio, Ettore (ed), *St. Mark's, the Art and Achitecture of Church and State in Venice* (New York: Riverside Book Company, Inc., 2003).
- Waley, Daniel, *Later Medieval Europe* (London: Longmans, 1975).
- Warr, Cordelia and Janis Elliott (eds), *Art and Architecture in Naples, 1266-1713* (Chichester: Wiley-Blackwell, 2010).

- Webb, Matilda, *The Churches and Catacombs of Early Christian Rome* (Brighton: Sussex Academic Press, 2010).
- White, John, *Art and Architecture in Italy: 1250 - 1400*, 3<sup>rd</sup> ed. (New Haven: Yale University Press, 1966).
- Wirtz, Rolf C., *Art and Architecture of Florence*, trans. by Susan Cox, Fiona Muller and Peter Barton (Cologne: Konemann, 1999).
- Witt, Ronald G. *The Two Latin Cultures and the Foundation of Humanism in Medieval Italy* (Cambridge: Cambridge University Press, 2012).
- Woods, Kim W. (ed), *Making Renaissance Art*, Vol. 1 in the series Renaissance Art Reconsidered (New Haven and London: Yale University Press, 2007).
- Zucker, Mark, 'Parri Spinelli Drawings Reconsidered', *Master Drawings Association*, Vol. 19, No. 4, 1981, pp. 426-71.

## Appendix 1

### Tables from the Database of Buildings where Mosaics were installed on Walls and Ceilings between 1270 and 1529

- Table 11: Buildings in Arezzo with wall/ceiling mosaics
- Table 12: Buildings in Florence with wall/ceiling mosaics
- Table 13: Buildings in Lucca with wall/ceiling mosaics
- Table 14: Buildings in Orvieto with wall/ceiling mosaics
- Table 15: Buildings in Perugia with wall/ceiling mosaics
- Table 16: Buildings in Pisa with wall/ceiling mosaics
- Table 17: Buildings in Pistoia with wall/ceiling mosaics
- Table 18: Buildings in Rome with wall/ceiling mosaics
- Table 19: Buildings in Sicily with wall/ceiling mosaics
- Table 20: Buildings in Siena with wall/ceiling mosaics
- Table 21: Buildings in Southern Italy with wall/ceiling mosaics
- Table 22: Buildings in Venice with wall/ceiling mosaics

#### Key

Mosaics installed 1270 to 1329
Mosaics installed 1330 to 1449
Mosaics installed 1450 to 1529

The rationale for these three sub-periods is explained in full in the Introduction to the Thesis, pp. 21-24. In brief, the period 1270 – 1329 saw the vast bulk of mosaic activity; period 1330 – 1449 saw a much lower rate of mosaic activity; period 1450 – 1529 saw a small increase in mosaic activity.

Table 11: Buildings in Arezzo with wall/ceiling mosaics

Arezzo	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Old cathedral		Early 14 <sup>th</sup> C	Tarlati, Lords of Pietramala	Vault		Gaddo Gaddi	Unknown		Vault collapsed, mosaic ruined never repaired	<sup>497</sup> <sup>498</sup>

<sup>497</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 265.

<sup>498</sup> Giorgio Vasari, *Lives of the Most Eminent painters, Sculptors and Architects* (London: Macmillan and Co. Ltd. and the Medici Society, 1912), p. 84.



Table 12: Buildings in Florence with wall/ceiling mosaics

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistery of Saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	1260-1275	Calimala Guild	Vault	12 m dia circle	Workshop "Tuscan artists"	Christ in judgement showing stigmata in a medallion (part of Last Judgement).			499
		1260-1270		Vault, second tier, south west and north west segments?		Workshop "Milieu of Meliore"	The Virgin, Angels, Apostles, and St John the Baptist (part of Last judgement).			500
		1260-1270		Vault, third tier, south west and west segments.		Workshop "Milieu of Meliore and of Coppo di Marcovaldo"	The saved souls and paradise (part of Last judgement).			501
		1260-1270		Vault, first tier, south west		Workshop "Tuscan artists"	Angels with the trumpets of judgement and symbols of the Passion (part of Last Judgement).			502

<sup>499</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 484-487.

<sup>500</sup> Ibid. pp. 492-495.

<sup>501</sup> Ibid. pp. 496-498.

<sup>502</sup> Ibid. pp. 484-486, 488-491.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistery of saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	1270-1290	Calimala Guild	Vault, third tier, north, north east, east, south east and south segments.		<i>Workshop "Tuscan artists"</i> 1906 Arturo Viligiardi	Scenes from Genesis in sequence.		1906	<sup>503</sup>
		1270-1305		Vault, fourth tier, north, north east, east, south east and south segments.		<i>Workshop "Tuscan artists"</i>	Scenes from the life of Joseph in sequence.			<sup>504</sup>
		1280-1305		Vault, sixth tier, north, north east, east, south east and south segments.		<i>Workshop "Tuscan artists"</i>	Scenes from the life of St John the Baptist in sequence.			<sup>505</sup>
		1260-1270 Early 14 <sup>th</sup> C		West side, chancel, vault.		<i>Workshop "Artist close to Coppo di Marcovaldo and early 14<sup>th</sup>C Venetian masters"</i>	Mystic lamb, prophets and patriarchs Abraham, Isaac, Jacob, Daniel, Ezechiel, Jeremias, Isaias, Moses, St John the Baptist enthroned, Madonna and Child enthroned and telamones.			<sup>506</sup>

<sup>503</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 420-421.

<sup>504</sup> Ibid. pp. 436, 437.

<sup>505</sup> Ibid. pp. 468, 469.

<sup>506</sup> Ibid. pp. 244-255.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistery of Saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	1265 1275	Calimala Guild	West side, chancel, triumphal arch, soffit		<i>Workshop "Florentine-Pisan Artist"</i>	12 prophets and bust of the Virgin.	Latin names		<sup>507</sup>
		1270 1275		Vault, third tier, north segment.		<i>Workshop "Milieu of Coppo di Marcovaldo"</i>	Christ Blessing and the Creation of the World, Adam and Eve.			<sup>508</sup>
		1270 1275		Vault, fourth tier, north segment.			Joseph's dream.			<sup>509</sup>
		1270 1275		Vault, third tier, north west and west segments.			The damned souls in Hell (part of the Last Judgement).			<sup>510</sup>
		1275 1280		Vault, fifth tier, north segment.		Forerunner of Cimabue	Scenes from the Life of the Virgin - Annunciation, Visitation and Nativity			<sup>511</sup>
		1280 1285		Vault, third and fourth tiers, north east segment.		Artist close to Cimabue	Fall, Rebuke of the Creator, Expulsion from Paradise and Joseph sold into Slavery.			<sup>512</sup>

<sup>507</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 242, 243.

<sup>508</sup> Ibid. pp. 421-423.

<sup>509</sup> Ibid. p. 437.

<sup>510</sup> Ibid. pp. 499-501.

<sup>511</sup> Ibid. pp. 452-455.

<sup>512</sup> Ibid. pp. 424-426, 440.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistery of Saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	1280-1285	Calimala Guild	Vault, sixth tier, north segment.		Artist close to Cimabue	Scenes from the Life of John the Baptist. The birth of St John the Baptist and the naming of the child, and the young St John the Baptist in the wilderness			<sup>513</sup>
		1280-1290		Vault, third tier, east segment.		<i>Workshop "Milieu of Master of the Magdalen"</i>	The labours of Adam and Eve, the sacrifice of Cain and Abel, and killing of Abel. Joseph is appointed ruler of Egypt.			<sup>514</sup>
		1280-1290		Vault, fourth tier, north east, east and south east segments.			Scenes from the Life of Christ. Adoration of the Magi, dream of the Magi, return journey of the Magi, the Presentation in the temple, St Joseph's dream, and the flight into Egypt			<sup>515</sup>
		1280-1290		Vault, fifth tier, north east and east segments.			Scenes from the Life of St John the Baptist. St John the Baptist preaching to, and baptising the people, and foretelling the coming of Christ.			<sup>516</sup>

<sup>513</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 470, 471.

<sup>514</sup> Ibid. pp. 427, 429.

<sup>515</sup> Ibid. p. 448.

<sup>516</sup> Ibid. pp. 456-461.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistry of Saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	1280 1290	Calimala Guild	Vault, third tier, east segment.		<i>Workshop "Milieu of Master of the Magdalen"</i>	The labours of Adam and Eve, the sacrifice of Cain and Abel, and killing of Abel. Joseph is appointed ruler of Egypt.			517
		1280 1290		Vault, fourth tier, north east, east and south east segments.			Scenes from the Life of Christ. Adoration of the Magi, dream of the Magi, return journey of the Magi, the Presentation in the temple, St Joseph's dream, and the flight into Egypt			518
		1280 1290		Vault, fifth tier, north east and east segments.			Scenes from the Life of St John the Baptist. St John the Baptist preaching to, and baptising the people, and foretelling the coming of Christ.			519
		1280 1290		Vault, sixth tier, north east and east segments.			Baptism of Christ, St John the Baptist rebuking Herod, and St John the Baptist in prison.			520

<sup>517</sup> Paolucci, *The Baptistry of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 427, 429.

<sup>518</sup> Ibid. p. 448.

<sup>519</sup> Ibid. pp. 456-461.

<sup>520</sup> Ibid. pp. 472-477.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistery of Saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	1290 1295	Calimala Guild	Vault, third tier, south segment.		<i>Workshop "Artist working in the Sienese style"</i>	The entry into the ark and the Flood and the return of the dove.			521
				Vault, fourth tier, south segment.			The storing of grain. Joseph is worshipped by his brothers, and the reunion of Joseph and Jacob.			522
		1290 1295		Vault, fifth tier, south segment.			Life of Christ - the holy women at the tomb.			523
		1290 1295		Vault, fifth and sixth tiers south east segment.		<i>Workshop "Master of Assisi"</i>	Life of Christ. The massacre of the innocents, the Last Supper, and Christ is arrested			524
		Late 13 <sup>th</sup> C		Vault		Jacopo di Meliore	Head of boy about to enter gates of Paradise.			525
		Late 13 <sup>th</sup> C		Over the tribune (worked with Andreas Tafi)		Apollonius				526 527

<sup>521</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 433-435.

<sup>522</sup> Ibid. pp. 449-451.

<sup>523</sup> Ibid. p. 467.

<sup>524</sup> Ibid. pp. 462 - 464, 478-480.

<sup>525</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), pp. 309, 310.

<sup>526</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 201.

<sup>527</sup> Vasari, *Lives of the Most Eminent painters, Sculptors and Architects*, Vol. 1, pp. 47-49.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistry of Saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	Late 13 <sup>th</sup> C	Calimala Guild	Over the tribune (worked with Andreas Tafi)		Apollonius				528 529
		Late 13 <sup>th</sup> C		Over the tribune (worked with Apollonius). Ceiling.		Andreas Tafi	Christ, paradise and inferno.			530 531 532
		1300 1305		Vault, fourth tier, north segment.		Deodata di Orlandi (Orlando)	Joseph relates his dream to his parents and Joseph joins his brothers in Dothain.			533
		1300 1305		Vault, sixth tier, south segment.		Deodata di Orlandi (Orlando)	The beheading of the Baptist, Salome presenting the head of the Baptist to Herodias and the burial of the Baptist.			534

<sup>528</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 201.

<sup>529</sup> Vasari, *Lives of the Most Eminent painters, Sculptors and Architects*, Vol. 1, pp. 47-49.

<sup>530</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 201.

<sup>531</sup> Vasari, *Lives of the Most Eminent painters, Sculptors and Architects*, Vol. 1, pp. 47-49.

<sup>532</sup> Paolucci, *The Baptistry of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>533</sup> Paolucci, *The Baptistry of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 438, 439.

<sup>534</sup> Ibid. pp. 481-483.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistery of Saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	1300-1310	Calimala Guild	Vault, north west and north sides, gallery, parapet screens.		Lippo di Benivieni	Ezechiel, Amos and Abdias.			<sup>535</sup>
		1300		Vault, fifth tier, south segment?		Lippo di Benivieni	Life of Christ. The Crucifixion and the Lamentation			<sup>536</sup>
		1300-1310		East side, gallery - first, central and third tribunes.		<i>Workshop "Milieu of the Master of San Gaggio and the Master of St Cecilia"</i>	Lunette - St Michael? Vault, back wall - St Philip. Lunette – Christ blessing. Vault and partition walls - symbols of evangelists. Back wall - St Peter and St Paul. Lunette – old man with other men. Vault – St Lucy and St Margaret. Partition walls – St Catherine and St Agnes. Back wall St Thaddeus.	Latin names of some saints often shortened.	Yes, 1994 Yes 1994 Yes 1994 Yes 1994	<sup>537</sup>

<sup>535</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 306-309.

<sup>536</sup> Ibid. pp. 465, 466.

<sup>537</sup> Ibid. pp. 316-333.



Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistry of Saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	1310-1320	Calimala Guild	South side, first order, soffit of architrave of Andrea Pisano's door.		<i>Workshop "Milieu of the Master of San Gaggio"</i>	Three angel's heads.			538
		1310-1320		North east side, first order.			Frieze with seraphims and cherubims.			539
		1300-1310		South east, south and south west sides, gallery, parapet screens?			Zorobabel, Iesus, Simon, Eliseus, Samuel, Noah, Baruch, Joshua, Moses, Jacob, Isaac, Enoch, Elias and Abraham.	Latin names with Latin text		540
		1300-1310		South side, gallery, central tribune.			Lunette- young king with winged erotes, vault – male busts, back wall – St Thomas, St Andrew.			541
		1300-1310		South, south west, west and north west sides, panels on drums.			St Nicholas, St Isidore, St Stephen, St Augustine and St Jerome.	Latin names some shortened		542

<sup>538</sup> Paolucci, *The Baptistry of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 226, 227.

<sup>539</sup> Ibid. pp. 282, 283.

<sup>540</sup> Ibid. pp. 300-305.

<sup>541</sup> Ibid. pp. 342-347.

<sup>542</sup> Ibid. pp. 394-397.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistry of Saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	1301-1310	Calimala Guild	Panels on drum		<i>Workshop "Master of St Cecilia (and workshop)"</i>	St Basil, St John, St Parmen, St, Dionysius, St Ignatius, St Nicanore, St Sylvester, St Leo the Great, St Lawrence, St Zenobius, Pope St Gregory, St Ambrose, St Hilary, St Martin, St Fulgentius, Deacon saint, St Vincent, St Cyprian, St Gregory of Nyssa and St Proculus.	Yes, with Latin names often shortened.		<sup>543</sup>
		Early 14 <sup>th</sup> C		South east, north west, north and north east sides, gallery, and parapet screens.		<i>Workshop "Florentine Artists of early 14<sup>th</sup>C"</i>	Esdra, Isaias, Daniel, Hosea, Joel, Jonas, Naum, Habacuc, Micheas, Sophonias, Aggeas, Zaccharias, David, Solomon and Malachias.	Latin names with Latin text		<sup>544</sup>
Baptistry of Saint John the Baptist	Uncertain, possibly 1059 to 1128	1402	Calimala Guild	Vault, repair of mosaic.		Donato di Donato and Lippo di Corso			1402	<sup>545</sup>

<sup>543</sup> Paolucci, *The Baptistry of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 392-399.

<sup>544</sup> Ibid. pp. 300, 301, 306-311.

<sup>545</sup> Paolucci, *The Baptistry of San Giovanni, Florence*, Vol. 2 (Essays), p. 287.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Baptistery of Saint John the Baptist (San Giovanni)	Uncertain, possibly 1059 to 1128	1453	Calimala Guild	North side, first order - soffit of architrave of Ghiberti's first door.		Allessio Baldovinetti	Head of John the Baptist between two Angels.			<sup>546</sup>
		1455		East side, first order – soffit of architrave of “Doors of Paradise”.			Angels bearing the face of the Saviour.			<sup>547</sup>
				Chancel - repair of mosaic		Allessio Baldovinetti			1481 1483	<sup>548</sup>
San Miniato al Monte	1018 1207	1295	Calimala Guild	Apse		Francesco da Pisa with Barile, Cagnasso, Garoccio, Parduccio, Pogavansa, Turetto and Vanni di Firenze	Christ blessing San Miniato and the Virgin and symbols of the evangelists and donor.		1491 Allessio Baldovinetti	<sup>549</sup> <sup>550</sup> <sup>551</sup> <sup>552</sup>

<sup>546</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 280, 281.

<sup>547</sup> Ibid. pp. 216, 217.

<sup>548</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), pp. 287-289.

<sup>549</sup> Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, p. 283.

<sup>550</sup> Vasari, *Lives of the Most Eminent painters, Sculptors and Architects*, Vol. 3, pp. 67-70.

<sup>551</sup> Berenson, *Italian Pictures of the Renaissance*, Vol. 2, p. 21.

<sup>552</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, p. 35.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Miniato al Monte	1018 1207	Late 13 <sup>th</sup> C	Calimala Guild	Façade	10 m <sup>2</sup>	?	Christ blessing San Miniato and the Virgin.			<sup>553</sup>
Duomo – Santa Maria del Fiori	1296 1436	Late 13 <sup>th</sup> C	Cathedral	On the inside of facade		Gaddo Gaddi	Coronation of the Virgin.			<sup>554</sup>
San Miniato al Monte	1018 1207	1403 1404	Calimala Guild	Facade, repair of Mosaic		Lippo di Corso	Christ blessing San Miniato and the Virgin.			<sup>555</sup>
Duomo – Santa Maria del Fiori	1296 1436	1487	Cathedral	Façade portal, lunette above door		Domenico Ghirlandaio	Annunciation			<sup>556</sup> <sup>557</sup>

<sup>553</sup> Paolucci, *The Baptistry of San Giovanni, Florence*, Vol. 2 (Essays), p. 287

<sup>554</sup> Ibid. p. 285.

<sup>555</sup> Ibid. p. 287.

<sup>556</sup> Berenson, *Italian Pictures of the Renaissance*, Vol. 2, p. 75, 76.

<sup>557</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, p. 188.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo – Santa Maria del Fiore	1296 1436	1487 1491	Cathedral	Chapel of San Zanobi: competition to install mosaic – mosaic started but not finished (mosaic of San Zanobi in museum)		Sandro Botticelli, Domenico Ghirlandaio, Gherardo and Monte di Giovanni del Fora	Project abandoned.			558 559
		1490		Lunette above Porta della Mandorla		Davide and Domenico Ghirlandaio	Annunciation.			560
Santissima Annunziata	1250 and 1444 1447	1504		Lunette above central portal		Ridolfo and Davide Ghirlandaio	Annunciation with lilies.			561

<sup>558</sup> Andre Chastel, *Arte e Umanesimo a Firenze al tempo di Lorenzo il Magnifico* (Torino: Einaudi, 1964), pp. 260-264.

<sup>559</sup> Laurie Fusco and Gino Corti, *Lorenzo de' Medici* (Cambridge: Cambridge University Press, 2006), p. 138.

<sup>560</sup> 'Domenico Ghirlandaio', *Web Gallery of Art*, [http://www.wga.hu/html\\_m/g/ghirland/domenico/7panel/12mosaic.html](http://www.wga.hu/html_m/g/ghirland/domenico/7panel/12mosaic.html) [Accessed 9 January 2016].

<sup>561</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 325, 326.

**Table 13: Buildings in Lucca with wall/ceiling mosaics**

Lucca	1270-1329	1330-1449	1450-1529
-------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Frediano	Rebuilt 12 <sup>th</sup> C	Late 13 <sup>th</sup> C?		Facade		Berlingiero Berlinghieri?	Christ's Assumption and twelve apostles looking upwards with amazement and wonder at Christ (Virgin removed).	Yes	Yes 1627	<sup>562</sup> <sup>563</sup> <sup>564</sup>
Duomo San Martino	1070	Early 14 <sup>th</sup> C		Apse			Christ with four heavenly rivers flowing from his throne		No longer exists	<sup>565</sup>
		1308 or 1314?		Lunette above side door		Deodata Orlandi	Madonna and Child	Signed by Orlandi	Destroyed 1786	<sup>566</sup>

<sup>562</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 342.

<sup>563</sup> R. Silva, *La Basilica di S. Frediano in Lucca, urbanistica, architettura e erredo* (Lucca 1985), p. 17.

<sup>564</sup> Inscription reads "Alta viri celi spectantur cur Galilei? + iste Dei natus Galilei nube levatus."

<sup>565</sup> Franco Bellato, *The Cathedral of San Martino in Lucca*, trans. by Giuntini Maria (Lucca: Edizioni Cattedrale di San Martino, 2006), pp. 9, 11.

<sup>566</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), pp. 333, 342.

Table 14: Buildings in Orvieto with wall/ceiling mosaics

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo di Orvieto	1290 onwards	1310		Façade: overall design		Lorenzo Maitani (Capomaestro)				567 568
		1321-1329		Façade?		Angioletto da Gubbio				569
		1321		Facade		Andrea di Nello, Lonzo Maitani, Angioletto da Gubbio, Cecco Ciani, Puccio di Lotto, Buccio di Paolo, Cola di Petrangelo, Ghino di Pietro, Dardalini di Monteleone, Frate Giovanni Leonardelli				570

<sup>567</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 463.

<sup>568</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', p. 75.

<sup>569</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 104.

<sup>570</sup> Ibid. pp. 463-466.

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo di Orvieto	1290 onwards	1325		Façade: lunettes above the doors		Buccio di Aldobrandino, Buccio di Biagio and Nuto Somai				<sup>571</sup>
Duomo di Orvieto	1290 onwards	1330		Façade: wall at top and some of the columns		Buccio di Biagio				<sup>572</sup>
		1345		Façade: lower zone		Giovanni di Bonini di Assisi				<sup>573</sup> <sup>574</sup>
		1359		Façade: lower left hand gable		Orcagna (Andrea di Cione di Arcangelo)	The Baptism of Christ (now replaced)			<sup>575</sup> <sup>576</sup>
		c1360		Façade: lower right hand gable		Giovanni Leonardelli, Ugolino di prete Ilario	Nativity of the Virgin (now replaced 1583)		1583	<sup>577</sup>

<sup>571</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 464.

<sup>572</sup> Ibid. p. 464.

<sup>573</sup> Ibid. p. 461.

<sup>574</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence'. p. 75.

<sup>575</sup> Ibid. p. 75.

<sup>576</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 465.

<sup>577</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, pp. 255, 256.



Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo di Orvieto	1290 onwards	1365		Façade: secondary area behind lower right hand gable		Nellus Jacomini (Nello) and Giovanni Leonardelli	Annunciation to Anna			578 579
		1366		Façade: lower central gable		?	Assumption of the Virgin			580
		1376 and earlier		Façade: upper right hand gable		Pietro Pucci (Magister Mosaici)	Presentation of the Virgin		17 <sup>th</sup> C	581 582
		?		Façade: upper left hand gable		? Davide Ghirlandaio	Marriage of the Virgin Repaired in 1490		1490 and 17 <sup>th</sup> C	583 584
		1388		Façade: Four corners round the outside of the central rose window		Pietro Pucci (Magister Mosaici)	Four church fathers			585

<sup>578</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, p. 255.

<sup>579</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', p. 88.

<sup>580</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, p. 255.

<sup>581</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 467.

<sup>582</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', p. 89.

<sup>583</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, p. 255.

<sup>584</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 469.

<sup>585</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', p. 89.

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo di Orvieto	1290 onwards	?		Façade: upper left hand gable		? Davide Ghirlandaio	Marriage of the Virgin Repaired in 1490		1490 and 17 <sup>th</sup> C	586 587
		14 <sup>th</sup> C		Façade: unspecified position – work included making tesserae, colouring tesserae and carrying out repairs		Cecco Ciani, Dardalini di Monteleone (Consiglio), Jacopo di Lotto, Puccio di Lotto, Andrea di Nello, Giovanni di Neri Todinello, Buccio di Paolo, Cola di Pietrangelo, Ghino di Pietro and, Johannes Pini.	Not known			588 589 590

<sup>586</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, p. 255.

<sup>587</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 469.

<sup>588</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', p. 84.

<sup>589</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, pp. 75-79.

<sup>590</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 463.

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo di Orvieto	1290 onwards	1388		Façade: Four corners round the outside of the central rose window		Pietro Pucci (Magister Mosaici)	Four church fathers			<sup>591</sup>
		? 1402 - restored		Façade: secondary area behind lower left hand gable		? Fra Francesco di Antonio	Annunciation of the Virgin		Again in 1659	<sup>592</sup>
		1414-1424		Façade: repairs but not specified		Andrea di Giovanni di Orvieto, Bartolemeo di Pietro and Giovenale				<sup>593</sup>
Duomo di Orvieto	1290 onwards	1450		Façade: upper central gable			Resurrection of Christ replaced in 1713 Coronation of the Virgin		1713 1842-1847	<sup>594</sup>

<sup>591</sup> Harding, 'The Production of Medieval Mosaics: The Orvieto Evidence', p. 89.

<sup>592</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 468.

<sup>593</sup> Ibid. p. 468.

<sup>594</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, p. 255.

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo di Orvieto	1290 onwards	1458		Façade: repairs to secondary area behind lower right hand gable		Jacomo da Bologna	Repaired figures of Saint Anna and an angel in the Annunciation of Anna and Saint Giacchino in the story of Saint Elizabeth			595

<sup>595</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 468.

Table 15: Buildings in Perugia with wall/ceiling mosaics

Perugia	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo	1300s	1340 1349		Facade (lost)		Giovanni Bonini di Assisi	Unknown			596 597

<sup>596</sup> Joanna Cannon, 'Giotto e il Trecento, Roma' in *Giotto e il Trecento* ed by Alessandro Tomei (Milan: 2009), pp. 188-190.

<sup>597</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p.105.

Table 16: Buildings in Pisa with wall/ceiling mosaics

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo Santa Maria Assumpta	1063	Late 13 <sup>th</sup> C		Central apse vault		Possibly Andreas Tafi, Gaddo Gaddi and Jacopo Torriti	Virgin			598
		1301		Central apse vault		Francesco da Pisa assisted by many including Bonturo, Ciolo, Dato. Cimabue assisted by Bardo	Christ in Majesty flanked by Virgin Mary on left hand side and St John the Evangelist on right hand side.			599
		1301-2				Cimabue	(Started by Francesco da Pisa et al, carried on by Cimabue and finished by Vincino da Pistoia)			600
		1321				Vincino da Pistoia				601

<sup>598</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>599</sup> Bellosi, *Cimabue*, p. 283.

<sup>600</sup> Malafarina, *Il Duomo di Pisa*, p. 172.

<sup>601</sup> Matteo Panzeri, 'Automatic Indexes of Literary Sources for Art History: The Notizie by Federico Alizeri', *Historical Social Research* Vol. 14, No. 4, 1989, pp. 10-16.

<sup>602</sup> Malafarina, *Il Duomo di Pisa*, p. 172.

<sup>603</sup> Ibid. p. 10.

<sup>604</sup> Ibid. p. 172.

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo: Santa Maria Assumpta	1063	1321 1345		North transept: apse calotte, Chapel of Blessed Sacrament (formerly Chapel of Annunciation)		Francesco Traini	Annunciation			<sup>605</sup>
		1321 1345		South transept: apse calotte, Chapel of Saint Raynerius (formerly Coronation of the Virgin)		Francesco Traini	Assumption			<sup>606</sup>
Duomo: Santa Maria Assumpta	1063	c1455?		South transept: lunette above door of Saint Raynerius – two minor semi-circular bands of mosaic decoration above a sculpture by Andrea Guardi		?	Sculpture - Madonna and Child and two Angels. Mosaic - nearest to sculpture – geometric design; furthest from sculpture – fruit vegetables and ribbons			<sup>607</sup>
		2 <sup>nd</sup> half 15 <sup>th</sup> C		Façade: lunette above right hand bronze door		Alessio Baldovinetti	St John the Baptist		1829	<sup>608</sup>

<sup>605</sup> Malafarina, *Il Duomo di Pisa*, pp. 59, 153.

<sup>606</sup> Ibid. pp. 77, 156.

<sup>607</sup> Author's field work.

<sup>608</sup> Malafarina, *Il Duomo di Pisa*, p. 144.

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo: Santa Maria Assumpta	1063	2 <sup>nd</sup> half 15 <sup>th</sup> C		Façade: lunette above left hand bronze door		Alessio Baldovinetti	St Reparata		1829	<sup>609</sup>
		2 <sup>nd</sup> half 15 <sup>th</sup> C		Façade: lunette above central bronze door		Alessio Baldovinetti	The Assumption of the Virgin		1829	<sup>610</sup>
		1493		Facade?		Domenico Ghirlandaio			Yes	<sup>611</sup>

<sup>609</sup> Malafarina, *Il Duomo di Pisa*, p. 144.

<sup>610</sup> Ibid. p. 144.

<sup>611</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 166, 169.



Table 17: Buildings in Pistoia with wall/ceiling mosaics

Pistoia	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo	10 <sup>th</sup> C	?				Restored by Domenico Ghirlandaio with Raffaello, Baldino and Jacopo			Yes, 1493-1494	<sup>612</sup>

<sup>612</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 166-167.

Table 18: Buildings in Rome with wall/ceiling mosaics

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Lorenzo fuori le Mura	C6th, second half	C13th		Lintel of portico	14 square metres	Unknown	Very damaged.			<sup>613</sup>
Santa Maria in Trastevere	1120-43	1295	Bertoldo Stefaneschi	Half dome of apse (lower)		Pietro Cavallini	Scenes from the life of the Virgin.			<sup>614</sup>
San Crisogono		Late C 13 <sup>th</sup>		Apse (covers part)		Pietro Cavallini?	Virgin and Child with Saint Crisogono and James			<sup>615</sup>
San Pietro, 1st. Basilica	320-349, rebuilt mid C15th	1298	Cardinal Stefaneschi	Eastern Porch (facade)	13.5 x 9.5 m.	Giotto	The Navicella		Removed, C17th.	<sup>616</sup>

<sup>613</sup> Author's field work.

<sup>614</sup> Marchei, *S. Maria in Trastevere*, pp. 47-56.

<sup>615</sup> Oakeshott, *The Mosaics of Rome*, pp. 332-333.

<sup>616</sup> White, *Art and Architecture in Italy, 1250-1400*: pp. 337-338.

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Giovanni in Laterano	1308 (rebuilt)	1290s	Pope Nicholas IV	Apse (enlarge)		Jacopo Torriti, Jacopo da Camerino	Christ, Virgin, Saints John the Baptist, Peter, Paul, John the Evangelist and Andrew and Pope Nicholas IV.		1884	<sup>617</sup> <sup>618</sup> <sup>619</sup>
		1291	Pope Nicholas IV	Originally on wall of Apse or beside the entrance to Pope Nicholas IV ambulatory. Now located at the door of the Baptistry's sacristy			Pope Nicholas IV donor inscription			<sup>620</sup>
		1290s (replacement)	Pope Nicholas IV	Facade (lost)		Possibly Jacopo Torriti	Standing figure of Christ flanked by two archangels. (An image of the facade of San Giovanni in Laterano with the mosaic is shown in a fresco possibly by Giotto in San Francesco, Pisa.)		Yes, now lost	<sup>621</sup>

<sup>617</sup> Beny and Gunn, *Churches of Rome*, p. 98.

<sup>618</sup> Bussagli, *Rome, Art and Architecture*, p. 332.

<sup>619</sup> Vicchi, *The Major Basilicas of Rome*, pp. 80-81.

<sup>620</sup> Cooper, *The Making of Assisi*, p. 26.

<sup>621</sup> Gardner, *The Roman Crucible: the Artistic Patronage of the Papacy 1198-1304*, pp. 45, 259.

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Santa Maria Maggiore	420-40	1295-1305	Pope Nicholas IV and Cardinal Giacomo Colonna	Apse	177 square metres	Jacopo Torriti	Coronation of the Virgin with Christ and the Apostles. Life of the Virgin (plus scroll design that was possibly based on a classical original of c. 435).			622
Santa Maria in Aracoeli	650	1290s	Pope Nicholas IV?	Façade			Legend of Saint Francis, Dream of Innocent III, Saint Francis holding up the Lateran Basilica.		Mostly lost	623 624
Santa Maria in Aracoeli	650	1293		Capella di Santa Rosa da Viterbo			Our Lady amongst the Saints			625
Santa Maria in Aracoeli	650	1300		Tympanon above South Door		Workshop of Pietro Cavallini	Virgin and Child between two angels			626 627 628

<sup>622</sup> Vicchi, *The Major Basilicas of Rome*, pp. 147-158.

<sup>623</sup> Catherine Harding, 'Images of Authority, Identity, Power: Facade Mosaics Decoration in Rome during the Later Middle Ages', *RACAR (Canadian Art Review)*, Vol. XXIV, No. 1, 1997, p. 19.

<sup>624</sup> Cooper, *The Making of Assisi*, p. 22.

<sup>625</sup> Ronald Malmstrom, *S. Maria in Aracoeli at Rome* (New York: New York University, 1973), p. 20.

<sup>626</sup> Karl Baedeker (ed), *Central Italy and Rome*, 15<sup>th</sup> ed. (New York: Charles Scribner's Sons, 1909), p. 270.

<sup>627</sup> Fabrizio Alessio Angeli and Elizabeth Berti, 'Chiese Medioevali di Roma', [http://www.medioevo.roma.it/Chiese\\_di\\_Roma\\_001.pdf](http://www.medioevo.roma.it/Chiese_di_Roma_001.pdf) [Accessed 9 January 2016].

<sup>628</sup> Author's field work.

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Sancta Sanctorum Lateran Palace	1277-80	1300	Pope Nicholas III	On apse above altar	12.5 square metres	Jacopo Torriti and Jacopo da Camerino	Hollow cheeked Christ, angels and saints.			<sup>629</sup> <sup>630</sup>
Santa Maria Maggiore	420-440	Before 1297 or 1306-08 (date disputed)		Facade, disfigured		Filippo Ruscuti	Christ enthroned (shown in 17 <sup>th</sup> C drawing in the National Gallery of Scotland)	Signed by Ruscuti		<sup>631</sup>
Santa Maria in Trastevere	1120-43	C12th. restored C14th.		Facade	48 square metres	Unknown	Lactans Virgin, two clerics and ten virgins with agnus dei.			<sup>632</sup>

<sup>629</sup> Cernpanari, *Sancta Sanctorum Lateranense Vol. 1*, pp. 121-125.

<sup>630</sup> Bussagli, *Rome, Art and Architecture*, p. 329.

<sup>631</sup> Paul Hetherington, *Medieval Rome A Portrait of the City and its Life* (London: The Rubicon Press, 1994), p. 112

<sup>632</sup> Marchei, *S. Maria in Trastevere*, pp. 47-56.

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Paolo fuori le Mura	384, rebuilt C19th.	1325-1330	Pope John XXII	Facade		Pietro Cavallini	Medallion of Christ the Redeemer, angels, symbols of the evangelists, St Paul, the Virgin and Child enthroned, St John the Baptist presenting Pope John XXII to the Virgin.		Destroyed, C18th. Engraving by Piranesi. Fragment on back of triumphal arch	<sup>633</sup>
San Croce in Gerusalemme	1144	1485 copies of C5th mosaics		Chapel of St. Helen, walls and vault		Melosso da Forlì did the drawings, Baldassare Peruzzi did the mosaic	Christ, saints and S. Helena.			<sup>634</sup> <sup>635</sup>

<sup>633</sup> Bussagli, *Rome, Art and Architecture*, pp. 339, 340.

<sup>634</sup> Ibid. p. 400.

<sup>635</sup> Webb, *The Churches and Catacombs of Early Christian Rome*, p. 55.

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Santa Maria del Popolo	11 <sup>th</sup> C Rebuilt 1440s	1516		Chigi Chapel, vault		Luigi di Pace	Creation of the World from cartoon by Raphael.			<sup>636</sup>

<sup>636</sup> Campbell, *The Grove Encyclopaedia of Decorative Arts*, p. 126.

Table 19: Buildings in Sicily with wall/ceiling mosaics

Sicily	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Palermo Palatine Chapel	Possibly 1132	Original 1140 – 1148?		Nave, aisles and western portion			Restoration: Pantocrator, Saints Peter and Paul		1345	<sup>637</sup> <sup>638</sup>
							Restoration: Saint Peter healing the lame man (Paralytic of Lydda)		1350	
Palermo Palatine Chapel	Possibly 1132	Original 1140 – 1148?		Nave, aisles and western portion			Restoration: meeting of Saints Peter and Paul and disputation with Simon Magnus		1460 – 1473	<sup>639</sup> <sup>640</sup>
							Restoration: Raising of Tabitha		1462	
							Restoration: Saints Peter and Felix and the angel		1463	
				West wall of the nave			Restoration		15 <sup>th</sup> C	

<sup>637</sup> Demus, *The Mosaics of Norman Sicily*, pp. 26, 27, 30-31.

<sup>638</sup> Many of these restored mosaics have been obliterated by even later restorations to them.

<sup>639</sup> Demus, *The Mosaics of Norman Sicily*, pp. 26, 27, 30-31.

<sup>640</sup> Many of these restored mosaics have been obliterated by even later restorations to them.



Sicily	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Palermo Palatine Chapel	Possibly 1132	1506		Portico		Pietro Oddo	Scenes from the Old Testament			<sup>641</sup>
Palermo Cathedral	C 11 <sup>th</sup> – C 12 <sup>th</sup>	End 13 <sup>th</sup> C debated		Façade: niche above main porch			Virgin and Child enthroned with two half figures of angels			<sup>642</sup>
Palermo Cathedral	C 11 <sup>th</sup> – C 12 <sup>th</sup>	1321 - 1355	Sicilian Kings?	Main, central apse			Christ in benediction, Virgin, Saint John the Baptist and 3 donors (Fred and Eleanora who married in 1292 and the Archbishop of Messina)			<sup>643</sup> <sup>644</sup>
				Left apse			Enthroned Virgin with Christ Child, 2 female saints and 2 Sicilian Queens (Eleanora and Elisabetta)			<sup>645</sup> <sup>646</sup>
				Right apse			Saint John the Evangelist, 2 saints (Nicola and Mena) and 2 donors (King Ludovic of Aragon and Duke of Randazzo)			

<sup>641</sup> Demus, *The Mosaics of Norman Sicily*, p. 32.

<sup>642</sup> 'Palermo Cattedrale', *Touring Club Italiano*, [www.touringclub.com/chiesa/sicilia/palermo/cattedrale\\_31.aspx](http://www.touringclub.com/chiesa/sicilia/palermo/cattedrale_31.aspx) [Accessed 9 January 2016].

<sup>643</sup> Ibid.

<sup>644</sup> Demus, *The Mosaics of Norman Sicily*, p. 187, which suggests the mosaic was earlier.

<sup>645</sup> Otto Demus, *Byzantine Mosaic Decoration. Aspects of Monumental Art in Byzantium* (London: Routledge and Kegan Paul Ltd, 1953), p. 189.

<sup>646</sup> 'Palermo Cattedrale', [Accessed 9 January 2016].

Sicily	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
<b>Messina</b> Church of St Gregory		Second half C 13 <sup>th</sup>					(1) Enthroned Virgin with Child and kneeling donor (2) Archangel (3) Virgin lactans			647
<b>Messina</b> Badiazza, S. Maria del Valle		C 14 <sup>th</sup> ?					Head of the Apostle			648 649
<b>Messina</b> S Maria Fuori la Mura		C 13 <sup>th</sup>					Virgin in little room			650
<b>Monreale</b> Cattedrale di S. Maria la Nuova	1170	End C 13 <sup>th</sup> or early C 14 <sup>th</sup>					Virgin and Child			651

<sup>647</sup> Demus, *The Mosaics of Norman Sicily*, p. 189.

<sup>648</sup> Ibid. p. 187.

<sup>649</sup> 'Messina', *Treccani la Cultura Italiana*, [http://www.treccani.it/enciclopedia/messina\\_\(Enciclopedia-dell'-Arte-Medievale\)/](http://www.treccani.it/enciclopedia/messina_(Enciclopedia-dell'-Arte-Medievale)/) [Accessed 9 January 2016].

<sup>650</sup> Demus, *The Mosaics of Norman Sicily*, p. 187. Mosaic now in Museo Regionale, Messina.

<sup>651</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 189. Mosaic now in Galleria Regionale di Palazzo Abatellis, Palermo.

Sicily	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Monreale Cattedrale di S. Maria la Nuova	1170	C 12 <sup>th</sup> original		?		restored - Pietro Oddo	?		1518	<sup>652</sup> <sup>653</sup>
		?	Cardinal Giovanni Borgia	Sacristy and throughout the Cathedral		Maso Oddo	?		1495 - 1503	<sup>654</sup>

<sup>652</sup> Demus, *The Mosaics of Norman Sicily*, p. 156.

<sup>653</sup> Gaetano Millunzi, *Il Mosaicista Maestro Pietro Oddo, Ossia Restauri e Restauratori del Duomo di Monreale, Secolo XVI* (Whitefish, Montana: Kessinger, 2000), p. 16.

<sup>654</sup> 'Itinerari culturali del medioevo siciliano, le opere pittoriche e musive: mosaici', [Accessed 9 January 2016].

**Table 20: Buildings in Siena with wall/ceiling mosaics**

Siena	1270-1329	1330-1449	1450-1529
-------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Duomo Santa Maria	Late 10 <sup>th</sup> C, mainly 11 <sup>th</sup> C	Early 14 <sup>th</sup> C		Facade, lower			Unknown		Replaced	<sup>655</sup>
Duomo Santa Maria	Late 10 <sup>th</sup> C, mainly 11 <sup>th</sup> C	1358		Facade		Michele di Ser Memmo	Archangel Michael			<sup>656</sup>
Duomo Santa Maria	Late 10 <sup>th</sup> C, mainly 11 <sup>th</sup> C	Uncertain, before 1441		Facade, upper left hand side triangle			Young Virgin being presented to high priest of the temple		Yes, late 14 <sup>th</sup> C and in 1884	<sup>657</sup> <sup>658</sup> <sup>659</sup> <sup>660</sup> <sup>661</sup>

<sup>655</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, pp. 246, 248, 250.

<sup>656</sup> Ibid. p. 248.

<sup>657</sup> Ibid. p. 244.

<sup>658</sup> The mosaics are shown in frescoes of city events on the walls of the ancient hospital of Santa Maria della Scala opposite the Duomo and painted in 1441 and 1442 by two different artists.

<sup>659</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, p. 359.

<sup>660</sup> Jean Cadogan mentions a record of payments to Davide Ghirlandaio for restorations to the mosaics later in the 15<sup>th</sup> century although the record does not clearly state which mosaics.

<sup>661</sup> All three mosaics were restored in 1884 by artists from Murano, near Venice.

**Table 21: Buildings in Southern Italy with wall/ceiling mosaics**

Southern Italy	1270-1329	1330-1449	1450-1529
----------------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Salerno, Cathedral San Matteo	Rebuilt late C11 <sup>th</sup>	1260	Giovanni da Procida	Right apse			Archangel Saint Michael above the head of Saint Matthew with Saints Fortunatus, John, Jacob and Lawrence and a tiny figure of Giovanni da Procida	Names of Saints		662 663
		C13 <sup>th</sup>		Lunette above main door (interior)			Saint Matthew			664
Naples, San Restituta (in the old cathedral)	C7 <sup>th</sup> . Rebuilt C17 <sup>th</sup>	1322 Disputed Possibly 1313?	Robert of Naples? Cathedral Chapter?	Madonna del Principio Chapel (apse)		Lellus da Orvieta (Lellus da Roma)	Enthroned Madonna with Christ child on her lap, an unknown bishop standing on the left with a crosier and a simply dressed female saint on the right (St. Restituta)?			665 666 667

<sup>662</sup> Karl Baedeker (ed), *Southern Italy and Sicily* (London: T. Fisher Unwin, 1912), p. 197.

<sup>663</sup> Author's field work.

<sup>664</sup> Peter Gunn, *A Companion Guide to Southern Italy* (London: Collins, 1969), pp. 177-180.

<sup>665</sup> Baedeker, *Southern Italy and Sicily*, p. 328.

<sup>666</sup> D'Alberto, 'Arte come Strumento di Propaganda: Il mosaico di Santa Maria del Principio nel Duomo di Napoli', pp. 105-123.

<sup>667</sup> Author's field work and information sheet provided by Naples Cathedral.

Southern Italy	1270-1329	1330-1449	1450-1529
----------------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
Anagni, Duomo	C11/12 <sup>th</sup>	Early C14 <sup>th</sup>		Facade above the statue of Boniface VIII			Caetani coat of arms of Boniface' family. Mosaic is part of his memorial.			<sup>668</sup> <sup>669</sup>
Amalfi, Duomo di San Andrea	Rebuilt C10 <sup>th</sup> and C13 <sup>th</sup>	1348 original		Facade			Christ and angels		Now C19th replica	<sup>670</sup>

<sup>668</sup> Michelin et cie (ed), *The Green Guide, Italy* (Watford, England: Michelin Travel Publications, 2000), p. 86.

<sup>669</sup> Author's field work.

<sup>670</sup> Michelin, *The Green Guide, Italy*, p. 83.

Table 22: Buildings in Venice with wall/ceiling mosaics

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	1270-1280		Moses cupola: story of Moses	49.93m <sup>2</sup> curved	Second workshop of the atrium	Rosette plus scenes from the story of Moses.	Latin titles of scenes	1880-1890 1913-1918	<sup>671</sup>
		1270-1280		Moses cupola: pendentives of the cupola	30.04m <sup>2</sup> curved	Second workshop of the atrium	The Prophets: Zecharia, Malachi, David and Solomon.	Latin names, Bible quotes	1880-1890 1913-1915	<sup>672</sup>
		1270-1280		Moses cupola: semi-dome to the North of the cupola	14.84m <sup>2</sup> curved	Second workshop of the atrium.	The miracle of the manna and the quails. The miracle of the water from the rock (Life of Moses).	Bible quotes in Latin	1880-1890	<sup>673</sup>
		1270-1280		Zen Chapel: vault	52.57m <sup>2</sup> curved	Master who learned his craft in the second workshop of the atrium	Christ Emmanuel in a medallion and twelve scenes from the life of Saint Mark.	Latin titles	1870-1880 1970-1976	<sup>674</sup>

<sup>671</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 175, 176.

<sup>672</sup> Ibid. p. 177.

<sup>673</sup> Ibid. p. 177.

<sup>674</sup> Ibid. p. 182.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	Late 13 <sup>th</sup> C- Early 14 <sup>th</sup> C		Zen Chapel: niches above the door giving onto the atrium	5.50m <sup>2</sup> curved	Workshop active late 13 <sup>th</sup> C to early 14 <sup>th</sup> C	Jesus Christ (Emmanuel) and the Prophets Micah, Isaiah, Jeremiah and Hosea.	Latin names, Bible quotes	1878-1887 1908-1928 1933 1975-1977	<sup>675</sup>
San Marco	1063 onwards	Mid 14 <sup>th</sup> C		Baptistery: ante-Baptistery barrel vault	44.44m <sup>2</sup> curved	Workshop of the Baptistery	Bust of Christ and the Prophets.	Bible quotes	1870	<sup>676</sup>
		Mid 14 <sup>th</sup> C		Baptistery: walls below barrel vault	47.46m <sup>2</sup> flat		Scenes of the Magi, Flight into Egypt, Slaughter of the Innocents (Life of Christ).	Bible quotes	15 <sup>th</sup> C 1870 1890	<sup>677</sup> <sup>678</sup>
		Mid 14 <sup>th</sup> C		Baptistery: intrados between anti-Baptistery and Baptistery	24.95m <sup>2</sup> curved		The four Evangelists.	Latin names	1870 1890	<sup>679</sup>
		Mid 14 <sup>th</sup> C		Baptistery: dome above baptismal font	56.52m <sup>2</sup> curved		Christ sends the Apostles to baptise the Nations with each Apostle baptising in a country	Bible quote, name and country	1870 1890	<sup>680</sup>

<sup>675</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 180.

<sup>676</sup> Ibid. pp. 183, 184.

<sup>677</sup> Scenes of the Magi were re-touched by Paolo Uccello in 15<sup>th</sup> century.

<sup>678</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 184.

<sup>679</sup> Ibid. p. 185.

<sup>680</sup> Ibid. p. 185.



Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	Mid 14 <sup>th</sup> C		Baptistery: pendentives of dome above baptismal font	37.40m <sup>2</sup> curved		The Fathers of the Eastern Church	Bible quotes	1876-1890	<sup>681</sup>
		Mid 14 <sup>th</sup> C		Baptistery: intrados between the two domes	12.50m <sup>2</sup> curved		St Isidore Martyr, Blessed Pietro Orseolo. St Theodore Martyr and Blessed Antonio da Brescia	Latin names	1870-1890-1987-1989	<sup>682</sup>
		Mid 14 <sup>th</sup> C		Baptistery: dome above the altar	56.62m <sup>2</sup> curved		Christ in Glory and personification of nine angelic hierarchies		1870-1987-1990	<sup>683</sup>
		Mid 14 <sup>th</sup> C		Baptistery: pendentives of dome above altar	37.40m <sup>2</sup> curved		The Fathers of the Western Church	Latin names, Greek words	1870-1971-1975-1987-1989	<sup>684</sup>
		Mid 14 <sup>th</sup> C		Baptistery: lunette on the wall – right of altar	8.01m <sup>2</sup> flat 6.07m <sup>2</sup> curved		Scenes with Zechariah	Latin words		<sup>685</sup>

<sup>681</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 187.

<sup>682</sup> Ibid. p. 187.

<sup>683</sup> Ibid. p. 188.

<sup>684</sup> Ibid. p. 188.

<sup>685</sup> Ibid. p. 189.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	Mid 14 <sup>th</sup> C		Baptistery: lunette on the wall – above sepulchre of Doge Andrea Dandolo	14.13m <sup>2</sup> flat 7.53m <sup>2</sup> curved		The birth of John the Baptist			686
		Mid 14 <sup>th</sup> C		Baptistery: lunette and two frames on the wall – above door of Zen Chapel	10.60m <sup>2</sup> flat 10.11m <sup>2</sup> curved		Scenes from the life of John the Baptist.	Latin words		687
		Mid 14 <sup>th</sup> C		Baptistery: two frames above the opposite arch	13.51m <sup>2</sup> flat 4.32m <sup>2</sup> Curved		John the Baptist announces the baptism of the Nations, and St Nicholas	Bible quote, Latin names		688
		Mid 14 <sup>th</sup> C		Baptistery: lunette on the wall above Sepulchre of Doge Giovanni Soranzo	19.71m <sup>2</sup> flat		The Baptism of Christ.	Latin title		689
		Mid 14 <sup>th</sup> C		Baptistery: lunette on the wall above door giving on to the church	14.13m <sup>2</sup> flat 7.53m <sup>2</sup> Curved		The dance of Salome and the Martyrdom of John the Baptist.	Bible quote		690

<sup>686</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 190.

<sup>687</sup> Ibid. p. 190.

<sup>688</sup> Ibid. p. 191.

<sup>689</sup> Ibid. p. 191.

<sup>690</sup> Ibid. p. 191.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	Mid 14 <sup>th</sup> C		Baptistry: lunette on the wall to the left of the altar	8.01m <sup>2</sup> flat 6.07m <sup>2</sup> curved		Martyrdom of John the Baptist, Salome presents the head of John the Baptist to Herodius, and the burial of the Saint.	Bible quotes in Latin, Greek words		<sup>691</sup>
		Mid 14 <sup>th</sup> C		Baptistry: lunette on the wall behind the altar	17.30m <sup>2</sup> flat 7.81m <sup>2</sup> curved		Christ crucified with the Virgin, St Mark, St John the Evangelist, St John the Baptist and Doge Andrea Dandolo.	Bible quotes, Latin names	1870-1980-1991	<sup>692</sup>
		14 <sup>th</sup> C		Tribune near Saint Clement's Door: upper west intrados	2.17m <sup>2</sup> curved	Workshop of the Baptistry	Ornate decoration.			<sup>693</sup>
		Mid 14 <sup>th</sup> C		Chapel of San Isidore: vault	33.94m <sup>2</sup> pier 62.52m <sup>2</sup> curved	Workshop of Saint Isidore's Chapel	Seventeen scenes from the life of San Isidore, disposed on two bands on each half of the vault.	Titles of each scene in Latin	1878-1887-1986-1987	<sup>694</sup>
		Mid 14 <sup>th</sup> C		Chapel of San Isidore: lunette on the wall above the altar	13.17m <sup>2</sup> flat		Christ enthroned between Saint Mark and Saint Isidore.	Latin names + text	1880-1890	<sup>695</sup>

<sup>691</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 192.

<sup>692</sup> Ibid. p.192.

<sup>693</sup> Ibid. p. 134.

<sup>694</sup> Ibid. pp. 193-195.

<sup>695</sup> Ibid. p. 196.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	Mid 14 <sup>th</sup> C		Chapel of San Isidore: lunette on the wall in front of the altar	13.17m <sup>2</sup> flat		Virgin and Child enthroned between Saint John the Baptist and Saint Nicholas.	Latin names + Bible quote		<sup>696</sup>
		1433-1442		Chapel of the Mascoli: left half of the vault	63.66m <sup>2</sup> flat	Michele Giambono and Venetian Craftsmen	The birth of Mary and the Presentation in the Temple.	Made by Michele Giambono	1818-1822 1870 1936 1969-1970	<sup>697</sup>
		1433-1442		Chapel of the Mascoli: back wall	12.42m <sup>2</sup> flat	Michele Giambono and Venetian Craftsmen	The Annunciation			<sup>698</sup>
		First half 15 <sup>th</sup> C		Chapel of the Mascoli: right half of the vault	63.66m <sup>2</sup> flat	Venetian Craftsmen	The Visitation			<sup>699</sup> <sup>700</sup>

<sup>696</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 196.

<sup>697</sup> Ibid. p. 197.

<sup>698</sup> Ibid. pp. 197, 198.

<sup>699</sup> Based on cartoons by Jacopo Bellini and Michele Giambono.

<sup>700</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 197-199.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	Mid 15 <sup>th</sup> C		Chapel of the Mascoli: right half of the vault		Antonio di Jacopo and Silvestro di Pietro mainly	The Dormitio Virginis	fecit		701 702
		1451		Chapel of the Mascoli: back wall		Michele Giambono and Venetian Craftsmen	Profiling with floral designs			703
		1451		Chapel of the Mascoli: three medallions in band at highest point of the vault		Michele Giambono and Venetian Craftsmen	Virgin and Child, Isaiah and David	Isaias Propheta Davit Propheta		704
		1458		Dome of Saint Leonard: south transept, intrados supporting south vault	18.76m <sup>2</sup> curved	Master Silvestro di Pietro	Saint Anthony, the Abbot and Saint Paul, the first Hermit			705
		Mid 15 <sup>th</sup> C		Dome of Saint Leonard: south transept, intrados supporting south vault	18.76m <sup>2</sup> curved	Master Antonio di Jacopo	Saint Bernardine of Siena and Saint Vincent Ferrer and Latin monogram for Jesus			706

<sup>701</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 197-199.

<sup>702</sup> Based on cartoons by Andrea del Castagno for the general layout, Jacopo Bellini (first four apostles on the right) and Michele Giambono (last five apostles). Venetian mosaicists did the apostles and the inscription *fecit*.

<sup>703</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 197-199.

<sup>704</sup> Ibid. pp. 197-199.

<sup>705</sup> Ibid. p. 96.

<sup>706</sup> Ibid. p. 96.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	Mid 15 <sup>th</sup> C		Dome of Saint Leonard: south transept, pendentives of the dome	15.51m <sup>2</sup> curved	Remake – Mosaicist not known	Saint Euphemia and Saint Erasma	Latin names	1927	<sup>707</sup>
		End 15 <sup>th</sup> C		North façade: lunette above the entrance to the little church of Saint Theodore		Alvise Bastiani (attributed to)	Saint George killing the Dragon			<sup>708</sup>
		1506		Dome of the Choir of the Prophets: conch	70.87m <sup>2</sup> curved	Pietro de Zorzi (remake)	Christ enthroned	Maker and first restorer in Latin + dates	1716 1885-1890 1904-1908	<sup>709</sup>
		1507		Dome of the Ascension: Piers of the east vault to the south	7.63m <sup>2</sup> flat	Prete Grisogono Novello	Saint Paul	Greek name. Latin maker	1892-1895 1962-1970	<sup>710</sup>
		1509		Saint Clement's Chapel: north west corner – pendentive	4.50m <sup>2</sup> flat 4.10m <sup>2</sup> curved	Pietro de Zorzi	Seraphim		1880 1900	<sup>711</sup>

<sup>707</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 86.

<sup>708</sup> Ibid. p. 204.

<sup>709</sup> Ibid. p. 30.

<sup>710</sup> Ibid. p. 63.

<sup>711</sup> Ibid. p. 47.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	First decade 16 <sup>th</sup> C		Left hand Choir: piers of the vault to the East	9.71m <sup>2</sup> flat	Vincenzo Bastiani	Fathers of the Western Church: Saint Ambrose	Name and maker in Latin	1867-1880 1959-1966	<sup>712</sup>
		First decade 16 <sup>th</sup> C		Dome of the Ascension: intrados beside the south vault	9.38m <sup>2</sup> curved	Pietro de Zorzi	Zechariah	Name and maker in Latin	1890-1900 1951-1954	<sup>713</sup>
		Early 16 <sup>th</sup> C		Saint Clement's Chapel: piers of the vault to the East	9.71m <sup>2</sup> flat	Pietro de Zorzi	The Fathers of the Eastern Church: Saint John Chrysostom	Name in Greek	1880-1890 1959-1966	<sup>714</sup>
		1512		Dome of Saint Leonard: south transept, pendentives of the dome	15.51m <sup>2</sup> curved	Vincenzo Bastiani	Saint Tecla	Name and maker in Latin	1953	<sup>715</sup>

<sup>712</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 37.

<sup>713</sup> Ibid. p. 66.

<sup>714</sup> Ibid. p. 46.

<sup>715</sup> Ibid. p. 86.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	1515 1516		Zen Chapel: sides of the altar	9.24m <sup>2</sup> flat	Pietro de Zorzi and his son Vincenzo del Musaico	Two mosaics with the coat of arms of Cardinal Zen surrounded by decorations		1870-1880 1970 1986	<sup>716</sup>
		1517		Dome of the Choir of the Prophets: walls flanking the Presbytery	3.00m <sup>2</sup> flat	Marco Luciano Rizzo Vincenzo Bianchini	Angel dressed in blue  Angel dressed in green			<sup>717</sup> <sup>718</sup>
		1524-1530		Sacristy: vault	208.4m <sup>2</sup> flat	Marco Luciano Rizzo, Alberto Zio Prete and Francesco Zuccato	The Great Cross, Christ and the Evangelists (in four medallions) and around the Cross fourteen Prophets within medallions	Latin names and Bible quotes	1891-1895	<sup>719</sup> <sup>720</sup>

<sup>716</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 182.

<sup>717</sup> Ibid. p. 32.

<sup>718</sup> These were apprentice pieces with a view to obtaining the title Master Mosaicist.

<sup>719</sup> Based on cartoons by Titian and others.

<sup>720</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 200, 201.



Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Marco	1063 onwards	1524 – 1530?		Sacristy; lunettes	78.20m <sup>2</sup> flat	Marco Luciano Rizzo, Alberto Zio Prete and Francesco Zuccato	The twelve Apostles, Saint Mark and Saint Paul	Two signed Zuccato, one by Rizzo	1891-1895	<sup>721</sup> <sup>722</sup>
		c1530?		The Apocalypse vault:	136.0m <sup>2</sup> curved	Francesco Zuccato	St John sleeping, Angels guarding the seven churches in Asia, Lamb on the book among symbols of Evangelists and Saints, the woman crowned and Michael killed the dragon	Latin Bible quotes, Makers name on last one	1870 1892-1893 1906-1935	<sup>723</sup> <sup>724</sup>
		1532		Creation cupola: niche over Saint Clement's door	2.07m <sup>2</sup> flat	Valerio Zuccato	Saint Clement	Latin name and maker	1878-1887 1949-1950	<sup>725</sup> <sup>726</sup>

<sup>721</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 202.

<sup>722</sup> Based on cartoons by Titian, his brother Francesco Vecellio and others.

<sup>723</sup> The mosaic "The Angels guarding the seven churches of Asia" led to the famous trial involving the Zuccato brothers.

<sup>724</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 136, 137.

<sup>725</sup> Ibid. p. 146.

<sup>726</sup> Based on a cartoon by Titian.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Name of Building	Date of Building	Date of mosaic	Commissioner	Mosaic position	Size of mosaic	Mosaicist	Subject Matter	Inscriptions	Restoration	Ref
San Salvador	Started 1508	1523	Marco Tron Procurator	Left hand apse (presbytery)		Grisogono Novello	Oversized chalice with two figures in white, one kneeling and one standing holding a crosier, on a gold background	IHS		<sup>727</sup>

<sup>727</sup> Tafuri, *Venice and the Renaissance*, p. 27.

## Appendix 2: Database of Mosaicists and where they worked, 1270 - 1529

Table 23: Arezzo

Table 24: Florence

Table 25: Lucca

Table 26: Orvieto

Table 27: Perugia

Table 28: Pisa

Table 29: Pistoia

Table 30: Rome

Table 31: Sicily

Table 32: Siena

Table 33: Southern Italy

Table 34: Venice

Table 35: Other possible mosaicists

### Key

Mosaicists who worked between 1270 to 1329
Mosaicists who worked between 1330 to 1449
Mosaicists who worked between 1450 to 1529
Other possible mosaicists

**Table 23: Arezzo: Mosaicists who worked in the city between 1270 and 1529 in chronological order**

Arezzo	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Gaddi, Gaddo (Gaddo di Zanobi)	Early 14 <sup>th</sup> C	Old Cathedral	Vault (now collapsed)		Mosaic lost	Painter of frescos (colleague of Cimabue) Architect. Mosaics in Florence (Baptistery and Duomo), Rome (San Giovanni in Laterano) and Pisa (Duomo)	Florence b, c1239 d, 1312	728  729 730 731 732 733

<sup>728</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>729</sup> Ibid. p. 285.

<sup>730</sup> Ibid. p. 285.

<sup>731</sup> Ibid. p. 285.

<sup>732</sup> Giorgio Vasari, *Le vite de' più eccellenti pittori, scultori e architettori* (Milano: 1878), pp. 267-272.

<sup>733</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p.285.

**Table 24: Florence: Mosaicists who worked in the city between 1270 and 1529 in chronological order**

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
<i>Workshop "Milieu of Meliore"</i>	1260 1270	Baptistry	Vault, second tier south west and north west segments?	Original	Virgin, Angels Apostles and Saint John the Baptist (part of Last Judgement)			<sup>734</sup>
<i>Workshop "Milieu of Meliore and of Coppo di Marcovaldo"</i>	1260 1270	Baptistry	Vault, third tier, south west and west segments	Original	The saved souls and paradise (part of Last Judgement)			<sup>735</sup>
<i>Workshop "Artist close to Coppo di Marcovaldo and early 14<sup>th</sup>C Venetian masters"</i>	1260 1270 Early 14 <sup>th</sup> C	Baptistry	Vault, chancel	Original	Virgin and Child enthroned, John the Baptist enthroned, Prophets and Patriarchs			<sup>736</sup>

<sup>734</sup> Paolucci, *The Baptistry of San Giovanni, Florence, Vol. 2* (Photo-Atlas), pp. 492-495.

<sup>735</sup> Ibid. pp. 496-498.

<sup>736</sup> Ibid. pp. 244-255.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
<i>Workshop "Tuscan Artists)</i>	1260 1270	Baptistery	Vault, first tier south west segment	Original	Angels with the trumpets of judgement and symbols of the Passion (part of Last Judgement)			<sup>737</sup>
	1260 1275	Baptistery		Original	Christ in Judgement showing stigmata in a medallion (part of Last Judgement)			<sup>738</sup>
	1270 1305	Baptistery	Vault, fourth tier, north, north east, east, south east and south segments	Original	Scenes from the Life of Joseph in sequence			<sup>739</sup>
	1280 1305	Baptistery	Vault, sixth tier, north, north east, east, south east and south segments	Original	Scenes from the life of St John the Baptist in sequence			<sup>740</sup>

<sup>737</sup> Paolucci, *The Baptistery of San Giovanni, Florence, Vol. 2* (Photo-Atlas), pp. 484-486, 488-491.

<sup>738</sup> Ibid. pp. 436, 437.

<sup>739</sup> Ibid. pp. 492-495.

<sup>740</sup> Ibid. pp. 468, 469.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
<i>Workshop "Artist from a Pisan Milieu"</i>	1265 1275	Baptistery	West side – chancel, triumphal arch, outer and inner archivolts	Original	Christ blessing and 17 busts of apostles, evangelists and saints			741
<i>Workshop "Florentine-Pisan Artist"</i>	1265 1275	Baptistery	West side - chancel, triumphal arch, soffit	Original	12 prophets and bust of the Virgin			742
<i>Workshop "Milieu of Coppo di Marcovaldo"</i>	1270 1275	Baptistery	Vault, third tier, north segment	Original	Christ blessing, Creation of the World and Adam and Eve			743
			Vault, fourth tier, north segment	Original	Joseph's dream			744
			Vault, third tier, north and north west segments	Original	The damned souls in Hell (part of Last Judgement)			745

<sup>741</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 236-239.

<sup>742</sup> Ibid. pp. 242, 243.

<sup>743</sup> Ibid. pp. 421-423.

<sup>744</sup> Ibid. p. 437.

<sup>745</sup> Ibid. pp. 499-501.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
<i>Forerunner of Cimabue</i>	1275 1280	Baptistery	<i>Vault, fifth tier, north segment</i>	<i>Original</i>	<i>Scenes from the Life of the Virgin – Annunciation, Visitation and Nativity.</i>			<sup>746</sup>
Artist close to Cimabue	1280 1285	Baptistery	Vault, third and fourth tiers, north east segment.	Original	Fall, rebuke of the Creator, Expulsion from Paradise and Joseph sold into slavery			<sup>747</sup>
	1280 1285	Baptistery	Vault, sixth tier, north segment	Original	Scenes from the life of St John the Baptist			<sup>748</sup>
<i>Workshop “Milieu of Master of the Magdalen”</i>	1280 1290	Baptistery	Vault, third tier east segment	Original	Labours of Adam and Eve, sacrifice of Cain and Abel and killing of Abel. Joseph is appointed ruler of Egypt			<sup>749</sup>

<sup>746</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 452-455.

<sup>747</sup> Ibid. pp. 424-426, 440.

<sup>748</sup> Ibid. pp. 470, 471.

<sup>749</sup> Ibid. pp. 427-429.



Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
<i>Workshop "Milieu of Master of the Magdalen"</i>	1280 1290	Baptistery	Vault, fourth tier, north east, east and south east segments	Original	Scenes from the Life of Christ, including adoration of the Magi and flight into Egypt			750
			Vault, fifth tier, north east and east segments and sixth tier, north east and east segments	Original	Scenes from the Life of St John the Baptist.			751 752
<i>Workshop "Artist working in the Sienese style"</i>	1290 1295	Baptistery	Vault, third tier, south segment	Original	Entry into Ark and the flood and return of the dove.			753
			Vault, fourth tier, south segment	Original	Storing of grain and Reunion of Joseph and his brothers.			754
			Vault, fifth tier, south segment	Original	Life of Christ – holy women at the tomb.			755

<sup>750</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), p. 448.

<sup>751</sup> Ibid. pp. 456-461.

<sup>752</sup> Ibid. pp. 472-477.

<sup>753</sup> Ibid. pp. 433-435.

<sup>754</sup> Ibid. pp. 449-451.

<sup>755</sup> Ibid. p. 467.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
<i>Workshop "Master of Assisi"</i>	1290 1295	Baptistery	Vault, fifth and sixth tiers, south east segments	Original	Life of Christ – massacre of the innocents, the Last Supper and Christ's arrest.			<sup>756</sup>
Apollonius	Late 13 <sup>th</sup> C	Baptistery	Over tribune (worked with Andrea Tafi)	Original	Christ	Painter	Greece (Venice)	<sup>757</sup> <sup>758</sup>
Meliori, Jacopo di	Late 13 <sup>th</sup> C	Baptistery	Vault	Original	Head of boy about to enter Paradise	Painter: Altarpiece – Madonna and Child enthroned with SS Peter and Paul – San Leolino, Panzano	Florence (active 1255 - 1285)	<sup>759</sup>

<sup>756</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 462-464, 478-480.

<sup>757</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 201.

<sup>758</sup> Vasari, *Lives of the Most Eminent painters, Sculptors and Architects*, pp. 47-49.

<sup>759</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), pp. 309, 310.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Tafi, Andrea (Tassi)	Late 13 <sup>th</sup> C	Baptistery	Over tribune (worked with Apollonius) Ceiling	Original  Original	Christ  Christ, Paradise and inferno.	Mosaic: Rome (San Giovanni in Laterano) and Pisa (Duomo)	Venice b, d, 1294	760 761 762 763 764 765 766
Pisa, Francesco da	1295	San Miniato al Monte	Apse (with Barile, Garoccio, Parduccio, Cagnasso, Turetto, Vanne di Firenzi and Pogavansa)	Original	Christ blessing San Miniato and the Virgin plus donor	Mosaic in Pisa (Duomo)		767 768 769
Barile	1295	San Miniato al Monte	Apse (with Francesco da Pisa (see his entry) and others)	Original	Christ blessing San Miniato and the Virgin plus donor	Mosaic in Pisa (Duomo)		770

<sup>760</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 201.

<sup>761</sup> Vasari, *Lives of the Most Eminent painters, Sculptors and Architects*, Vol. 1, pp. 47-49.

<sup>762</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>763</sup> Ibid. p. 285.

<sup>764</sup> Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, Vol. 1, pp. 267-272.

<sup>765</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>766</sup> Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, pp. 267-272.

<sup>767</sup> Michael Bryan (ed), *Dictionary of Painters and Engravers, Biographical and Critical* (London: George Bell and Sons, 1886), p. 283.

<sup>768</sup> Ibid. p. 283.

<sup>769</sup> Bellosi, *Cimabue*, p. 283.

<sup>770</sup> Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, p. 283.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Garoccio	1295	San Miniato al Monte	Apse (with Francesco da Pisa (see his entry) and others)	Original	Christ blessing San Miniato and the Virgin plus donor	Mosaic in Pisa (Duomo)		<sup>771</sup>
Parduccio	1295	San Miniato al Monte	Apse (with Francesco da Pisa (see his entry) and others)	Original	Christ blessing San Miniato and the Virgin plus donor	Mosaic in Pisa (Duomo)		<sup>772</sup> <sup>773</sup>
Pogavansa	1295	San Miniato al Monte	Apse (with Francesco da Pisa (see his entry) and others)	Original	Christ blessing San Miniato and the Virgin plus donor	Mosaic in Pisa (Duomo)		<sup>774</sup> <sup>775</sup>
Turetto	1295	San Miniato al Monte	Apse (with Francesco da Pisa (see his entry) and others)	Original	Christ blessing San Miniato and the Virgin plus donor	Mosaic in Pisa (Duomo)		<sup>776</sup>
Vanni di Firenze	1295	San Miniato al Monte	Apse (with Francesco da Pisa (see his entry) and others)	Original	Christ blessing San Miniato and the Virgin plus donor	Mosaic in Pisa (Duomo)		<sup>777</sup> <sup>778</sup>

<sup>771</sup> Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, p. 283.

<sup>772</sup> Ibid. p. 283.

<sup>773</sup> Bellosi, *Cimabue*, p. 283.

<sup>774</sup> Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, p. 283.

<sup>775</sup> Bellosi, *Cimabue*, p. 283.

<sup>776</sup> Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, p. 283.

<sup>777</sup> Ibid. p. 283.

<sup>778</sup> Bellosi, *Cimabue*, p. 283.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Orlandi (Orlando), Deodata di	1300 1305	Baptistery	Vault, fourth tier, north segment	Original	Joseph's dream and joining his brothers in Dothain.	Painter: frescoes Lucca and Pisa: e.g. the wooden Crucifix from Sacristy of Convent of St Francis of Pisa. Mosaics in Duomos in Lucca and Pisa.	Lucca b, c1280 d, before 1331	779
			Vault, sixth tier, south segment	Original	Beheading, presentation by Salome and burial of St John the Baptist.			780
<i>Workshop "Milieu of the Master of San Gaggio and the Master of St Cecilia"</i>	1300 1310	Baptistery	East side gallery, first second and third tribunes	Original	Christ, Apostolic saints and local saints			781
<i>Workshop "Milieu of the Master of San Gaggio"</i>	1300 1310	Baptistery	Walls, tribune, gallery, parapet screens and panels on drums	Original	Angels and local saints.			782 783 784 785

<sup>779</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 438, 439.

<sup>780</sup> Ibid. pp. 481-483.

<sup>781</sup> Ibid. pp. 316-333.

<sup>782</sup> Ibid. pp. 226, 227.

<sup>783</sup> Ibid. pp. 282, 283.

<sup>784</sup> Ibid. pp. 300-304.

<sup>785</sup> Ibid. pp. 342-347, 394-396

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
<i>Workshop "Milieu of the Master of San Gaggio and the Master of St Cecilia"</i>	1300 1310	Baptistery	East side gallery, first second and third tribunes	Original	Christ, Apostolic saints and local saints			786
<i>Workshop "Milieu of the Master of San Gaggio"</i>	1300 1310	Baptistery	Walls, tribune, gallery, parapet screens and panels on drums	Original	Angels and local saints.			787 788 789 790
Lippo di Benivieni	1300 1310	Baptistery	Vault, north west and north sides, gallery and parapet screens Vault, fifth tier, south segment?	Original  Original	Ezechial, Amos and Abdias  Life of Christ – Crucifixion and Lamentation.			791  792
Cagnasso	1301	San Miniato al Monte	Apse (with Francesco da Pisa (see his entry) and others)	Original		Christ blessing San Miniato and the Virgin plus donor		793

<sup>786</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 316-333.

<sup>787</sup> Ibid. pp. 226, 227.

<sup>788</sup> Ibid. pp. 282, 283.

<sup>789</sup> Ibid. pp. 300-304.

<sup>790</sup> Ibid. pp. 342-347, 394-396.

<sup>791</sup> Ibid. pp. 306-309.

<sup>792</sup> Ibid. pp. 465, 466.

<sup>793</sup> Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, p. 283.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Bingo	1301 1302	Baptistery	Theft of glass and tesserae with Pazzo	Original				794 795
Pazzo	1301 1302	Baptistery	Theft of glass and tesserae with Bingo	Original				796 797
Workshop "Master of St Cecilia (and workshop)"	1301 1310	Baptistery	Panels on drum	Original	Local saints			798
Workshop "Florentine Artists of early 14 <sup>th</sup> C"	Early 14 <sup>th</sup> C	Baptistery	Gallery, south east, north west, north and north east sides and parapet screens	Original	Old Testament characters			799

<sup>794</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 283.

<sup>795</sup> Giovanni Filippi, *L'arte dei mercanti di Calimala in Firenze* (Torino: Fratelli Bocca Editori, 1889), p. 79.

<sup>796</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 283.

<sup>797</sup> Filippi, *L'arte dei mercanti di Calimala in Firenze*, p. 79.

<sup>798</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 392-399.

<sup>799</sup> Ibid. pp. 300, 301, 306-311.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Gaddi, Gaddo (Gaddo di Zenobi)	Early 14 <sup>th</sup> C	Baptistery	Parapet screens (finished work of Andrea Tafi)	Original	Prophets	Painter of frescos (colleague of Cimabue) Architect. Mosaics in Rome (San Giovanni in Laterno), Pisa (Duomo) and Arezzo (old cathedral)	Florence b, c1239 d, 1312	800
	Early 14 <sup>th</sup> C	Duomo	Facade lunette	Original	Conation of the Virgin			801
								802
								803
								804
Bartolommei, Giovanni	c1338	Baptistery		Removed mosaic				805
Gaddi Agnolo	1384	Baptistery	Tribune – repair of mosaics done by Andrea Tafi.	Repair		Painter: frescoes in Santa Croce, Florence and Duomo, Prato	b, 1350 d, 1396	806 807

<sup>800</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>801</sup> Ibid. p. 285.

<sup>802</sup> Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, pp. 267-272.

<sup>803</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>804</sup> Ibid. p. 285.

<sup>805</sup> Ibid. p. 284.

<sup>806</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 286.

<sup>807</sup> Berenson, *Italian Pictures of the Renaissance*, Vol. 2, pp. 67, 68.



Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Donato, di Donato	1402	Baptistery	Vault (with Lippo di Corso)	Repair		Restored pavement marble intarsia of Baptistery in 1406		808 809
Lippo Fiorentino (Lippo di Corso)	? 1402  1403 1404	Baptistery  San Miniato del Monte	? Vault (with Donato di Donato) Facade	Original Repair	Saint Francis  Christ blessing San Miniato and the Virgin	Painter: with Rossello di Jacopo Franchi did 12 apostles in Duomo in Florence.	Florence? 1357 - 1404	810  811
Uccello, Paolo (Paolo di Dona)	After 1426, before 1436	Church of San Marco, Florence	?			Cartoons for round glass windows, Duomo, Florence. Painter – frescoes – Santa Maria Novella and San Miniato al Monte, Florence. Mosaic in Venice (Duomo)	Prato-vecchio, Tuscany b, 1397 d, 1475	812 813

<sup>808</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 287.

<sup>809</sup> Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, p. 341.

<sup>810</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 287.

<sup>811</sup> Ibid. p. 287.

<sup>812</sup> Parronchi, *Paolo Uccello*, pp. 2, 13.

<sup>813</sup> Mario Salmi, *Paolo Uccello, Andrea del Castagno, Domenico Veneziano*, trans. by Jean Chuzeville (Paris: Librairie Gallimard, 1939), pp. 199, 200 and plates 24 and 25.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Gambassi (Francesco di Domenico di Ivo da Gambassi)	1436	Baptistery?	? Called back to Florence from Lubeck to work on mosaics	?		Worked in Lubeck		814
Baldovinetti, Alessio	1453 1455 1483 1491	Baptistery  San Miniato al Monte	Walls: soffit above Ghiberti doors  Chancel ?	Original  Repair Repair	Saint John the Baptist, Angels  Christ, Virgin and symbols	Painter: lots of works in Florence. Stained glass in Capella dei Pazzi, Santa Croce. Intarsia work in Duomo, Florence.		815 816 817 818 819 820 821
Baldovinetti, Alessio						Mosaic Pisa Duomo		822 823

<sup>814</sup> 'Document o0202001.233vg', *Opera di Santa Maria del Fiore*, <http://archivio.operaduomo.fi.it/cupola/ENG/HTML/S021/C437/T007/TBLOCK00.HTM> [Accessed 9 January 2016].

<sup>815</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 216, 217.

<sup>816</sup> Ibid. pp. 280, 281.

<sup>817</sup> Kennedy, *Alessio Baldovinetti. A Critical and Historical Study*, p. 60.

<sup>818</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 287.

<sup>819</sup> Vasari, *Lives of the Most Eminent painters, Sculptors and Architects*, Vol. 3, p. 69

<sup>820</sup> Berenson, *Italian Pictures of the Renaissance*, Vol. 2, p. 21.

<sup>821</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, p. 35.

<sup>822</sup> Malafarina, *Il Duomo di Pisa*, p. 144.

<sup>823</sup> Chastel, *Arte e Umanesimo a Firenze al tempo di Lorenzo il Magnifico*, p. 261.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Ghirlandaio, Domenico	1487	Duomo Santa Maria del Fiore	Chapel of Saint Zenobius in collaboration with Gherardo di Giovanni del Fora (not completed)	Original	Project abandoned	Painter: frescoes: many works in Florence (Santa Maria Novella, Saint Jerome in Maria Novella and Saint Jerome in Ognisanti), Rome (Sistine Chapel) and Tuscany, Lucca and Pisa. Intarsia work in Duomo, Florence and Fiesole Curia Vescovile. Santa Maria Novella and Santa Maria Maddalena dei Pazzi, Florence and Santa Maria del Carceri, Prato	Florence b, 1449 d, 1494	824
	1487		Lunette above door	Repair	Annunciation			825
	1490		above Porta della Mandorla (with brother Davide)					826
								827

<sup>824</sup> Gino Corti and Laurie Fusco, *Lorenzo de' Medici* (Cambridge: Cambridge University Press, 2006), p. 138.

<sup>825</sup> Berenson, *Italian Pictures of the Renaissance*, Vol. 2, pp. 75, 76.

<sup>826</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, p. 188.

<sup>827</sup> 'Domenico Ghirlandaio', [Accessed 9 January 2016].

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Ghirlandaio, Domenico (continued)		Santa Maria del Fiore Palazzo Vecchio				Manuscript illumination in the Vatican. Metalwork in the Duomo, Florence - four candelabra. Mosaic in Duomos in Pistoia, Pisa and Siena.		828 829 830
Ghirlandaio, Davide (Bigordi)	1490	Santa Maria del Fiore	Above Porta della Mandorla (with brother Domenico)	Original	Virgin	Painter – St Lucy and a donor in S Maria Novella,	Florence b, 1452 d, 1525	831
	1496	Palazzo Vecchio	Great Hall (mosaic panel) (with brother Ridolfo) – Ecouen Mosaic now in Chateau d'Ecouen, France.	Original	Virgin and Child	Florence – often with brother Domenico.		832
	1509	Santissima Annunziata	Lunette above door (with brother Ridolfo)	Original	Annunciation with lillies	Mosaic in Siena (Duomo).		833834

<sup>828</sup> 'Domenico Ghirlandaio', [Accessed 9 January 2016].

<sup>829</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 166, 369.

<sup>830</sup> Ibid. pp. 166, 369.

<sup>831</sup> 'Domenico Ghirlandaio', [Accessed 9 January 2016].

<sup>832</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*: pp. 159, 160 and 324.

<sup>833</sup> Ibid. p. 166.

<sup>834</sup> Ibid. p. 325.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Botticelli, Sandro (Alessandro di Mariano di Vanni di Filipepi) Botticelli,	1491	Duomo Santa Maria del Fiore	Chapel of San Zanobi – worked with Gherardo di Giovanni del Fora, Monte di Giovanni del Fora and Domenico Ghirlandaio (not completed).	Original	Virgin	Painter- Primavera and Birth of Venus, both in the Uffizi. Illustrator - Dante's Divine Comedy, manuscript edition.	Florence b, 1445 d, 1510	<sup>835</sup>
Gherardo di Giovanni del Fora (Gherardo di Giovanni di Miniato)	1491	Duomo Santa Maria del Fiore	Chapel of Saint Zenobius in collaboration with his brother Monte, Domenico Ghirlandaio and Sandro Botticelli (not completed)	Original	Virgin	Painter, miniaturist and illuminator – The Combat of Love and Chastity, National Gallery, London	Florence b, 1445 d, 1497	<sup>836</sup> <sup>837</sup>
Monte di Giovanni del Fora (Monte di Giovanni di Miniato)	1491	Duomo Santa Maria del Fiore	Chapel of Saint Zenobius in collaboration with his brother Gherardo, Domenico Ghirlandaio and Sandro Botticelli (not completed)	Original	Virgin		Florence b, 1448 d, 1532 or 1533	<sup>838</sup>

<sup>835</sup> Chastel, *Arte e Umanesimo a Firenze al tempo di Lorenzo il Magnifico*, p. 260.

<sup>836</sup> Fusco, *Lorenzo de' Medici*, p. 138.

<sup>837</sup> Chastel, *Arte e Umanesimo a Firenze al tempo di Lorenzo il Magnifico*, pp. 260, 264.

<sup>838</sup> Ibid. pp. 260-264.

Florence	1270-1329	1330-1449	1450-1529
----------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Ghirlandaio, Ridolfo	1496	Palazzo Vecchio	Great Hall (mosaic panel) (with brother Davide) - Ecouen Mosaic now in Chateau d'Ecouen, France.	Original	Virgin and Child	Painter: Altarpieces, San Miniato al Tedesco and San Pier Scheraggio, fresco at Prato Cathedral and Pieta in S. Agostina, Colle Val d'Elsa		839
	1504	Santissima Annunziata	Lunette above central portal (with brother Davide)		Annunciation			840
								841

<sup>839</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*: pp. 159, 160 and 324.

<sup>840</sup> Ibid. p. 325, 326.

<sup>841</sup> Alison Brown, 'A contract for Ridolfo Ghirlandaio's Pieta in S. Agostino, Colle Val d' Elsa', *Burlington Magazine*, No. 125, 1983, p. 692, 693.

Table 25: Lucca: Mosaicists who worked in the city between 1270 and 1529 in chronological order

Lucca	1270-1329	1330-1449	1450-1529
-------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Berlinghieri, Berlinghiero	Late 13 <sup>th</sup> C	San Frediano	Facade	Original	Christ's Assumption and Apostolic saints (Virgin removed)	Painter: frescos. His school painted "Virgine con due Santi" in San Frediano, Lucca	Milan	<sup>842</sup> <sup>843</sup>
Orlandi (Orlando), Deodata di	1308 1314	Duomo, San Martino	Facade - lunette (lost – replaced by a bas-relief).	Original	Virgin and Christ Child	Painter: frescoes Lucca and Pisa: e.g. the wooden Crucifix from Sacristy of Convent of St Francis of Pisa. Mosaic in Florence (Baptistery)	Lucca b, c1280 d, before 1331	<sup>844</sup>  <sup>845</sup> <sup>846</sup>

<sup>842</sup> Giorgi, *Le Tre Basiliche di S. Frediano, nella Storia e nell'Arte*, p. 39.

<sup>843</sup> Ibid. pp. 26-27.

<sup>844</sup> Hourihane, *The Grove Encyclopaedia of Medieval Art and Architecture*, p. 280.

<sup>845</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), pp. 438, 439.

<sup>846</sup> Ibid. pp. 481-483.

**Table 26: Orvieto: Mosaicists who worked in the city between 1270 and 1529 in chronological order**

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Nello, Andrea di (Zampino) (di San Miniato)	Early 14 <sup>th</sup> C	Duomo	Facade: made gold and silver tesserae	Original			San Miniato	<sup>847</sup>
Maitani, Lonzo (Lorenzo)	1308	Duomo	Facade: overall design and may have done sculptures on façade and also involved with the mosaics (blew glass).	Original		Architect and Sculpture - may have done sculptures on façade of Duomo (Capomaestro)	Siena b, 1275 d, 1330	<sup>848</sup> <sup>849</sup>
Angioletto da Gubbio	1321	Duomo	Facade	Original		Painter and stained glass windows	Gubbio	<sup>850</sup>
Ciani, Cecco	1321	Duomo	Facade: made tesserae in colours.	Original				<sup>851</sup>
Lotto, Puccio di	1321	Duomo	Facade: made tesserae, terracotta and glass.	Original				<sup>852</sup>
Paolo, Buccio di	1321	Duomo	Facade: made tesserae in white	Original				<sup>853</sup>

<sup>847</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 464.

<sup>848</sup> Ibid. p. 463.

<sup>849</sup> Geza de Francovich, 'Lorenzo Maitani: Scultori e i bassorilevi della facciata del duomo di Orvieto', *Bollettino d'Arte*, No. Gennaio, 1928, pp. 91-95.

<sup>850</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 104.

<sup>851</sup> Ibid. p. 463.

<sup>852</sup> Ibid. p. 463.

<sup>853</sup> Ibid. p. 463.



Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Pietrangelo, Cola di	1321	Duomo	Facade: made tesserae in red and black	Original				<sup>854</sup>
Pietro, Ghino di	1321	Duomo	Facade: made tesserae in red and black	Original				<sup>855</sup>
Dardalini (Dardolini), di Monteleone (Consiglio)	1321 1345	Duomo	Facade: applied gold and silver	Original				<sup>856</sup>
Leonardelli, Frate Giovanni (Leonardelli, Giovanni di Buccio)	1321	Duomo	Facade: made silver and gold tesserae, glass windows and mosaics.	Original	Virgin (Nativity) (now replaced) Annunciation to Anna (Virgin's mother)	Drawings and under paintings for mosaics.		<sup>857</sup>
	C 1360		Façade: lower right hand side with Ugolino.	Original				<sup>858</sup>
			Facade: behind the gable	Original				<sup>859</sup>
Aldobrandino, Buccio di	1325	Duomo	Facade: lunettes above doors. Worked with Nuto Somai and Biagio.	Original				<sup>860</sup>

<sup>854</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 463.

<sup>855</sup> Ibid. p. 463.

<sup>856</sup> Ibid. p. 463.

<sup>857</sup> Ibid. pp. 464, 466.

<sup>858</sup> Ibid. p. 123 (document 54).

<sup>859</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, pp. 255, 256.

<sup>860</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 464.

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Nuto Somai, Pietro di	1325	Duomo	Facade: lunettes above doors. Worked with Biagio and Aldobrandino.	Original				<sup>861</sup>
Biagio, Buccio di	1325	Duomo	Facade: lunettes above doors. Worked with Nuto Somai and Aldobrandino.	Original				<sup>862</sup>
	1330		Facade: wall at the top and some columns.	Original				<sup>863</sup>
Bonini, Giovanni, di Assisi	1345	Duomo	Facade	Original		Stained glass at St Francis of Assisi, Orvieto and Perugia. Mosaic in Perugia (Duomo)	Assisi	<sup>864</sup> <sup>865</sup>
Pini, Johannes	1347	Duomo	Facade: mosaic master					<sup>866</sup>

<sup>861</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 464

<sup>862</sup> Ibid. p. 464.

<sup>863</sup> Ibid. p. 464.

<sup>864</sup> Ibid. p. 461.

<sup>865</sup> Cannon, 'Giotto e il Trecento, Roma', pp. 188-190.

<sup>866</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 481.

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Orcagna (Andrea di Cione di Arcangelo)	1359	Duomo	Façade: mosaic decoration and rose window	Original	Christ's baptism (now replaced)	Sculptor: Strozzi Chapel, Florence. Painter: fresco The Triumph of death and fresco in Cappella Maggiore, S. Maria Novella. Architect. Rose window, Orvieto Duomo.	Florence c 1306 – 1365	<sup>867</sup>       <sup>868</sup>
Neri Todinello, Giovanni di	1360	Duomo	Facade: replaced glass removed by Jacomino. Repaired some of Orcagna's work.	Repair				<sup>869</sup>       <sup>870</sup>
Nello di Jacomino da Roma	1360	Duomo	Facade: inspected Orcagna's mosaic and asked Giovanni di Neri Todinello to repair it. He did some repairs himself.	Repair			Rome	<sup>871</sup>

<sup>867</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 465.

<sup>868</sup> Cannon, *Religious Poverty, Visual Riches*, p. 302.

<sup>869</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 465.

<sup>870</sup> Ibid. p. 464.

<sup>871</sup> Ibid. p. 465.

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Cecco, Matteo di, di Assisi	1362	Duomo	Facade: judged Orcagna's work - agreed he should be paid with Matteo di Siena.				Assisi	<sup>872</sup>
Lotto, Jacomo di	1365	Duomo	Façade; repairs to repairs carried out by Giovanni di Neri Todinello.	Repair				<sup>873</sup>
Puccio, Piero (Pietro) di (or Pucco)	1376 1381 1386	Duomo	Facade:  With Ugolino	Original	Presentation of the Virgin. Marriage of the Virgin (repaired in 1490 by Davide Ghirlandaio)	Painter – frescoes in Cappella del Corporale, Orvieto Duomo (with Ugolino). Also, frescoes in Milan (1365) and Pisa (1389 – 1391).	b, c1355 d, c1400	<sup>874</sup>  <sup>875</sup>
Ugolino, di Prete Ilario	1381 1386	Duomo	Facade: with Piero Puccio	Original	Marriage of the Virgin	Painter – frescoes in chapel S. Corporale and choir in Duomo Orvieto.	Siena b,? d, c1404	<sup>876</sup>  <sup>877</sup>

<sup>872</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 446.

<sup>873</sup> Ibid. p. 466.

<sup>874</sup> Ibid. p. 467.

<sup>875</sup> Piero Torriti, *The Cathedral of Orvieto* (Florence: Casa Editrice, No publication date), p. 53.

<sup>876</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, pp. 465, 466

<sup>877</sup> Torriti, *The Cathedral of Orvieto*, p. 53.

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Antonio (Frate Francesco di Antonio da Orvieto)	1402	Duomo	Facade: lower left – restored Annunciation of the Virgin.	Repair	Annunciation of the Virgin.		Orvieto	<sup>878</sup> <sup>879</sup>
Andrea di Giovanni da Orvieto	1417 1424	Duomo	Facade: repair and remake new pieces with Bartolomeo di Pietro and Giovenale.	Repair		Painter: with Cola di Petrucchiolo did frescoes in choir of Orvieto Duomo.	Orvieto	<sup>880</sup>
Bartolomeo di Pietro	1417 1424	Duomo	Facade: repair and remake new pieces with Andrea di Giovanni and Giovenale.	Repair		Painter		<sup>881</sup>
Giovenale	1417 1424	Duomo	Facade: repair and remake new pieces with Andrea di Giovanni and Bartolomeo di Pietro.	Repair				<sup>882</sup>

<sup>878</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 468.

<sup>879</sup> Ibid. p. 108.

<sup>880</sup> Ibid. p. 468.

<sup>881</sup> Ibid. p. 468.

<sup>882</sup> Ibid. p. 468.

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Bologna, Jacomo da	1488	Duomo	Facade: repaired figures	Repair	St. Anna and an Angel in the Annunciation of St. Anna. St. Gioacchino in the story of St. Elizabeth.		Bologna	<sup>883</sup>
Ghirlandaio, Davide (Bigordi)	1490	Duomo	Facade: repaired middle left	Repair	Marriage of the Virgin.	Painter – St Lucy and a donor in S Maria Novella, Florence – often with brother Domenico. Mosaics in Florence (Duomo, Santissima Annunziata and Palazzo Vecchio) and Siena (Duomo)	Florence b,1452 d, 1525	<sup>884</sup> <sup>885</sup>  <sup>886</sup> <sup>887</sup> <sup>888</sup>

<sup>883</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 468.

<sup>884</sup> Ibid. p. 469.

<sup>885</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, p. 255.

<sup>886</sup> 'Domenico Ghirlandaio', [Accessed 9 January 2016].

<sup>887</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 159, 160 and 324.

<sup>888</sup> Ibid. p. 166.

Orvieto	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Rinaldo, Francesco di	1506 1522	Duomo	Facade	Repair	Angel of the Annunziata, Baptism and Wedding of the Virgin			<sup>889</sup>

<sup>889</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 469.

Table 27: Perugia: Mosaicists who worked in the city between 1270 and 1529 in chronological order

Perugia	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Bonini, Giovanni, di Assisi	1340 1349	Duomo	Facade	Original	?	Stained glass at St Francis of Assisi, Orvieto and Perugia. Mosaic in Orvieto (Facade of Duomo)	Assisi	<sup>890</sup> <sup>891</sup>

<sup>890</sup> Cannon, 'Giotto e il Trecento, Roma', pp. 188-190.

<sup>891</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 461.



**Table 28: Pisa: Mosaicists who worked in the city between 1270 and 1529 in chronological order**

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Tafi, Andrea (Tassi)	Last decade of 13 <sup>th</sup> C	Duomo	Apse – with Jacapo Torriti and Gaddo Gaddi	Original	Virgin	Mosaic in Rome (San Giovanni in Laterno)	b, d, 1294	<sup>892</sup> <sup>893</sup> <sup>894</sup> <sup>895</sup>
Torriti, Jacopo (Toriti)(Turriti)	Last decade of 13 <sup>th</sup> C	Duomo	Apse – with Andrea Tafi and Gaddo Gaddi	Original	Virgin	Painter: frescoes in Basilica San Francesco d'Assisi. Mosaics in Rome (San Giovanni in Laterano, Santa Maria Maggiori and Sancta Sanctorum)	Active 1270 to 1300.	<sup>896</sup>  <sup>897</sup> <sup>898</sup> <sup>899</sup> <sup>900</sup> <sup>901</sup>

<sup>892</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), pp. 284, 285.

<sup>893</sup> Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, pp. 267-272.

<sup>894</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), pp. 284, 285.

<sup>895</sup> Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, pp. 267-272.

<sup>896</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>897</sup> Bussagli, *Rome, Art and Architecture*, p. 332.

<sup>898</sup> Oakeshott, *The Mosaics of Rome*, pp. 311-313.

<sup>899</sup> Pietra Toesca, *Pietro Cavallini*, trans. by E. Andrews (London: Oldbourne Press, 1960), p. 6.

<sup>900</sup> Oakeshott, *The Mosaics of Rome*, pp. 311-324.

<sup>901</sup> Cernpanari, *Sancta Sanctorum Lateranense*, Vol. 1, pp. 121-125.

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Gaddi, Gaddo (Gaddo di Zanobi)	Last decade 13 <sup>th</sup> C. First decade 14 <sup>th</sup> C	Duomo	Apse – with Jacopo Torriti and Andrea Tafi	Original	Virgin	Painter of frescos (colleague of Cimabue) Architect.		902 903 904 905
Barile	1301	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ in Majesty with the Virgin and John the Evangelist			906
Cagnasso	1301	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ in Majesty with the Virgin and John the Evangelist			907
Garoccio	1301	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ in Majesty with the Virgin and John the Evangelist			908

<sup>902</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p.285.

<sup>903</sup> Ibid. p. 285.

<sup>904</sup> Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, pp. 267-272.

<sup>905</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>906</sup> Bellosi, *Cimabue*, p. 283.

<sup>907</sup> Ibid. p. 283.

<sup>908</sup> Ibid. p. 283.

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Parduccio	1301	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ in Majesty with the Virgin and John the Evangelist			<sup>909</sup>
Pisa, Francesco da	1301	Duomo	Apse – with others – Deodata di Orlandi, Dato, Bonturo, Maestro Ciolo, Duccio di Buoninsegna, Turetto, Garoccio, Vanne da Firenze, Parduccio, Barile Pogavansa and Cagnasso.	Original	Christ in Majesty with the Virgin and John the Evangelist	Mosaic in Florence (San Miniato al Monte)	Pisa	<sup>910</sup> <sup>911</sup> <sup>912</sup>
Pogovansa	1301	Duomo	Apse – with Francesco da Pisa (see his entry) and others.	Original	Christ in Majesty with the Virgin and John the Evangelist			<sup>913</sup>
Turetto	1301	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ in Majesty with the Virgin and John the Evangelist	Mosaic in Florence (San Miniato al Monte)		<sup>914</sup> <sup>915</sup>

<sup>909</sup> Bellosi, *Cimabue*, p. 283.

<sup>910</sup> Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, p. 283.

<sup>911</sup> Bellosi, *Cimabue*, p. 283.

<sup>912</sup> Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, p. 283.

<sup>913</sup> Bellosi, *Cimabue*, p. 283.

<sup>914</sup> Ibid. p. 283.

<sup>915</sup> Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, p. 283.

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Orlandi (Orlando), Deodata di	1301	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ in Majesty with the Virgin and John the Evangelist	Painter: frescoes Lucca and Pisa: e.g. wooden Crucifix, Sacristy of Convent of St Francis of Pisa. Mosaic in Florence (Baptistery) and Lucca (Duomo)	Lucca b, c1280 d, before 1331	<sup>916</sup>  <sup>917</sup> <sup>918</sup> <sup>919</sup>
Vanni da Firenze	1301	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ in Majesty with the Virgin and John the Evangelist	Mosaic in Florence (San Miniato al Monte)	Florence	<sup>920</sup> <sup>921</sup>
Cimabue (Bencivieni di Pepo or Benvenuto di Guiseppe)	1301 1302	Duomo	Apse – with collaborators including Bardo	Original	Apostolic saint (Saint John the Evangelist)	Painter: Wooden crucifixes in Arezzo and Santa Croce, Florence; frescoes in Assisi.		<sup>922</sup>

<sup>916</sup> Mariagiulia Burresi and Antonio Caleca, *Cimabue a Pisa* (Pisa: Pacineditore, 2005), pp. 256-265.

<sup>917</sup> Hourihane, *The Grove Encyclopaedia of Medieval Art and Architecture*, p. 280.

<sup>918</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 438, 439.

<sup>919</sup> Ibid. pp. 481-483.

<sup>920</sup> Bellosi, *Cimabue*, p. 283.

<sup>921</sup> Bryan, *Dictionary of Painters and Engravers, Biographical and Critical*, p. 283.

<sup>922</sup> Malafarina, *Il Duomo di Pisa*, pp. 140, 141.

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Bardo	1302	Duomo	Apse (with Cimabue)	Original	Apostolic saint (Saint John the Evangelist)			923
Bonturo	1302 1305	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ in Majesty with the Virgin and John the Evangelist			924
Buoninsegna, Duccio di	1302 1305	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ in Majesty with the Virgin and John the Evangelist	Painter: e.g. Maesta in Siena Duomo, Ruccellai Madonna was in S.M. Novella, Florence (now Uffizi Gallery, Florence) and stained glass in Siena.		925 926
Ciolo, Maestro	1302 1305	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ			927
Dato	1302 1305	Duomo	Apse – with Francesco da Pisa (see his entry) and others	Original	Christ			928

<sup>923</sup> Panzeri, 'Automatic Indexes of Literary Sources for Art History: The Notizie by Federico Alizeri', pp. 10-16.

<sup>924</sup> Ibid. pp. 10-16.

<sup>925</sup> Ibid. pp. 10-16.

<sup>926</sup> 'Duccio di Buoninsegna', <http://www.ducciodibuoninsegna.org>, [Accessed 9 January 2016].

<sup>927</sup> Panzeri, 'Automatic Indexes of Literary Sources for Art History: The Notizie by Federico Alizeri', pp. 10-16.

<sup>928</sup> Ibid. pp. 10-16.

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Pistoia, Vincino da (Vincino di Vanni)	1321	Duomo	Apse – completed the mosaic of the Virgin	Original	Virgin			929
Traini, Francesco	1321 1345	Duomo	Apse North transept mosaic of Annunciation (formerly in the Chapel of Annunciation). South transept – mosaic of Assumption (formerly in the Chapel of Coronation of Virgin.	Original  Original	Virgin  Virgin	Painter: altarpiece “St. Dominic with scenes from his life”, St. Caterina, Pisa (1342 – 1345).	Active 1321 to 1365.	930 931 932
Baldovinetti, Allessio	Mid to late 15 <sup>th</sup> C 1462?	Duomo	Façade- three lunettes above the three doors – St. Reparata, the Assumption of the Virgin and St. John the Baptist		Virgin, local saint and Saint John the Baptist	Painter with works in many places in Florence. Stained glass in Capella dei Pazzi, Santa Croce.	Florence b, 1426 d, 1499	933 934 935 936 937

<sup>929</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 301.

<sup>930</sup> Malafarina, *Il Duomo di Pisa*, pp. 147, 153.

<sup>931</sup> Ibid. pp. 148, 157.

<sup>932</sup> Cannon, *Religious Poverty, Visual Riches*, p. 263.

<sup>933</sup> Malafarina, *Il Duomo di Pisa*, p. 144.

<sup>934</sup> Chastel, *Arte e Umanesimo a Firenze al tempo di Lorenzo il Magnifico*, p. 261.

<sup>935</sup> Giorgio Vasari, *The Lives of the Artists*, Vol. 3, trans. by Julia and Peter Bondanella (Oxford: Oxford University Press, 1991), pp. 67-70.

<sup>936</sup> Berenson, *Italian Pictures of the Renaissance*, Vol. 2, p. 21.

<sup>937</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, p. 35.

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Baldovinetti, Allessio (continued)						Intarsia work in Duomo, Florence. Mosaic in Florence (San Miniata and Baptistry)		938 939 940 941
Ghirlandaio, Domenico	1493	Duomo	?	Repair		Painter: frescoes: many works in Florence (Santa Maria Novella and Saint Jerome in Ognisanti), Rome (Sistine Chapel) and Tuscany, Lucca and Pisa.	Florence b, 1449 d, 1494	942

<sup>938</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Photo-Atlas), pp. 216, 217.

<sup>939</sup> Ibid. pp. 280, 281.

<sup>940</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 287.

<sup>941</sup> Kennedy, *Alesso Baldovinetti. A Critical and Historical Study*, pp. 111, 112.

<sup>942</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 166, 369.

Pisa	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Ghirlandaio, Domenico (continued)						<p>Intarsia work in Duomo, Florence and Fiesole Curia Vescovile.</p> <p>Stained glass in Santa Maria Novella and Santa Maria Maddalena dei Pazzi, Florence and Santa Maria del Carceri, Prato.</p> <p>Manuscript illumination in the Vatican.</p> <p>Metalwork in the Duomo, Florence - four candelabra.</p> <p>Mosaic in Pistoia (Duomo), Florence (Duomo) and Siena (Duomo)</p>		<p>943</p> <p>944</p>

<sup>943</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 166, 167.

<sup>944</sup> Fusco and Corti, *Lorenzo de' Medici*, p. 137.



**Table 30: Pistoia: Mosaicists who worked in the city between 1270 and 1529 in chronological order**

Pistoia	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Ghirlandaio, Domenico	1493 1494	Duomo	Apse - with his assistants Raffaello, Baldino and Jacopo	Repair		Painter: frescoes: many works in Florence (S. Maria Novella and Saint Jerome in Ognisanti), Rome (Sistine Chapel) and Tuscany, Lucca and Pisa. Intarsia work in Duomo, Florence and Fiesole Curia Vescovile. Stained glass in Santa Maria Novella and Santa Maria Maddalena dei Pazzi, Florence and Santa Maria del Carceri, Prato. Manuscript illumination in the Vatican.	Florence b, 1449 d, 1494	<sup>945</sup>

<sup>945</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 166-167.

Pistoia	1270-1329	1330-1449	1450-1529
---------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Ghirlandaio, Domenico (Continued)						Metalwork in the Duomo, Florence - four candelabra Mosaics in Florence (Duomo), Pisa (Duomo) and Siena (Duomo).		946 947 948 949 950
Baldino	1493 1494	Duomo	Apse - with Raffaello and Jacopo as assistants to Domenico Ghirlandaio.	Repair				951
Jacopo	1493 1494	Duomo	Apse - with Raffaello and Jacopo as assistants to Domenico Ghirlandaio.	Repair				952
Raffaello	1493 1494	Duomo	Apse - with Baldino and Jacopo as assistants to Domenico Ghirlandaio.	Repair				953

<sup>946</sup> Fusco and Corti, *Lorenzo de' Medici*, p. 137.

<sup>947</sup> Berenson, *Italian Pictures of the Renaissance*, 2, pp. 75, 76.

<sup>948</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, p. 188.

<sup>949</sup> Ibid. pp. 166, 369.

<sup>950</sup> Fusco and Corti, *Lorenzo de' Medici*, p. 137.

<sup>951</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, p. 167.

<sup>952</sup> Ibid. p. 167.

<sup>953</sup> Ibid. p. 167.

**Table 30: Rome: Mosaicists who worked in the city between 1270 and 1529 in chronological order**

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Torriti, Jacopo (Toriti)(Turriti)	1291	San Giovanni in Laterano	Apse with Jacopo da Camerino (mosaic moved)	Original	Virgin, Christ, Apostolic saints, John the Baptist	Painter: frescoes in Basilica San Francesco d'Assisi. Mosaic in Pisa (Duomo)	Active 1270 to 1300.	<sup>954</sup>
	1295	Santa Maria Maggiori	Apse	Original	Coronation of the Virgin, Christ and Apostolic saints			<sup>955</sup>
	1296	Sancta Sanctorum	Apse probably with Jacopo da Camerino	Original	Hollow cheeked Christ angels and saints			<sup>956</sup>
	Last decade 13 <sup>th</sup> C							<sup>957</sup>
								<sup>958</sup>
								<sup>959</sup>

<sup>954</sup> Bussagli, *Rome, Art and Architecture*, p. 332.

<sup>955</sup> Oakeshott, *The Mosaics of Rome*, pp. 311- 13.

<sup>956</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>957</sup> Toesca, *Pietro Cavallini*, p. 6.

<sup>958</sup> Oakeshott, *The Mosaics of Rome*, pp. 311-324.

<sup>959</sup> Cimpanari, *Sancta Sanctorum Lateranense*, Vol. 1 , pp. 121-125.

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Camerino, Jacopo da	1291	San Giovanni Laterano	Apse: with Torriti.	Original	Hollow cheeked Christ angels and saints.		Camerino in Marche	<sup>960</sup>
	Late 13 <sup>th</sup> C	Sancta Sanctorum	Apse: probably helped Jacopo Torriti.	Original				<sup>961</sup> <sup>962</sup>
Cavallini, Pietro	1295	S. Maria Trastevere	Main central Apse	Original	The life of the Virgin (6 mosaics and Donor panel).	Painter – many frescoes in Roman and Neapolitan churches.	Rome b, c1250 d, 1330	<sup>963</sup>
	Late 13 <sup>th</sup> C	Old St. Peters Basilica	?	Original (but all lost)				<sup>964</sup>
	Late 13 <sup>th</sup> C	San Crisogono	Apse (covers part	Original	Virgin and Child with St Crisogono and James Medallion of Christ			<sup>965</sup> <sup>966</sup>

<sup>960</sup> Cernanari, *Sancta Sanctorum Lateranense*, Vol. 1, pp. 121-125.

<sup>961</sup> Bussagli, *Rome, Art and Architecture*, p. 332.

<sup>962</sup> Cernanari, *Sancta Sanctorum Lateranense*, Vol. 1, pp. 121-125.

<sup>963</sup> Oakeshott, *The Mosaics of Rome*, pp. 318-326.

<sup>964</sup> Bussagli, *Rome, Art and Architecture*, p. 336.

<sup>965</sup> Toesca, *Pietro Cavallini*, p. 12.

<sup>966</sup> Oakeshott, *The Mosaics of Rome*, pp. 332, 333.

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Cavallini, Pietro (continued)	1325	San Paolo fuori le Mura	Facade	Original	Medallion of Christ the Redeemer etc. (now destroyed)			967
Giotto (Giotto di Bondone)	1298	San Pietro		Original	The Navicello Removed in 17 <sup>th</sup> C	Painter: frescoes in Scrovegni Chapel in Padua, Santa Croce, Florence and Assisi.	Florence b, 1266 d, 1337	968 969
Tafi, Andrea (Tassi)	Last decade 13 <sup>th</sup> C	San Giovanni in Laterano	Apse (moved) ? with Jacopo Toritti and Gaddo Gaddi	Original		Mosaic in Pisa (Duomo)	b, d, 1294	970 971 972 973

<sup>967</sup> Bussagli, *Rome, Art and Architecture*, pp. 339, 340.

<sup>968</sup> White, *Art and Architecture in Italy, 1250-1400*, pp. 337, 338.

<sup>969</sup> Oakeshott, *The Mosaics of Rome*, pp. 328-332.

<sup>970</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>971</sup> Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, pp. 267-272.

<sup>972</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p. 285.

<sup>973</sup> Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, pp. 267-272.

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Gaddi, Gaddo (Gaddo di Zanobi)	Last decade 13 <sup>th</sup> C	San Giovanni in Laterano	Apse (moved) Collaborated with Andrea Tafi and Jacopo Torriti.	Original		Painter of frescoes (colleague of Cimabue). Architect. Mosaics in Florence (Duomo and Baptistery), Arezzo (Duomo) and Pisa (Duomo).	Florence b, c1239 d, 1312	974 975  976 977 978 979
Ruscuti, Filippo (Philippus Rusuti)	Late 13 <sup>th</sup> C	Santa Maria Maggiore	Facade		Christ enthroned	Painter - probably frescoes at Assisi.	b, c 1255 d, c 1325	980 981

<sup>974</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p 285.

<sup>975</sup> Vasari, *Le vite de' più eccellenti pittori, scultori e architettori*, pp. 267-272.

<sup>976</sup> Paolucci, *The Baptistery of San Giovanni, Florence*, Vol. 2 (Essays), p 285.

<sup>977</sup> Ibid. p. 285.

<sup>978</sup> Ibid. p. 285.

<sup>979</sup> Ibid. p. 285.

<sup>980</sup> Toesca, *Pietro Cavallini*, p. 17.

<sup>981</sup> Oakeshott, *The Mosaics of Rome*, p. 326.

Rome	1270-1329	1330-1449	1450-1529
------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
School of Cavallini?	Early 14 <sup>th</sup> C	S. Maria in Aracoeli	Lunette over south door		Virgin and Child in roundel.			<sup>982</sup>
Melozzo da Forlì	1485	Santa Croce in Gerusalemme	Chapel of Saint Helen (possibly a copy of 5 <sup>th</sup> C mosaic). Prepared drawings.	Original	Christ and local saints	Painter	Forlì, Emilia-Romagna b, 1438 d, 1494	<sup>983</sup> <sup>984</sup>
Pace, Luigi di	1516	Santa Maria del Popolo	Chigi Chapel		Creation of the World (from cartoons of Raphael)	Venice?	Venice?	<sup>985</sup>
Peruzzi, Baldassare Tommaso	Early 16 <sup>th</sup> C	Santa Croce in Gerusalemme	Ceiling		Christ and local saints	Architect and Painter. Design of Villa Chigi in Rome. Frescoes in Capella San Giovanni in Duomo of Siena.	Near Siena b, 1481 d, 1536	<sup>986</sup>

<sup>982</sup> Oakeshott, *The Mosaics of Rome*, p. 333.

<sup>983</sup> Bussagli, *Rome, Art and Architecture*, p. 400.

<sup>984</sup> Webb, *The Churches and Catacombs of Early Christian Rome*, p. 55.

<sup>985</sup> Campbell, *The Grove Encyclopaedia of Decorative Arts*, p. 126.

<sup>986</sup> 'Basilica di S. Croce in Gerusalemme', *Fondazione Federico Zeri, Università di Bologna*,

[http://catalogo.fondazionezeri.unibo.it/ricerca.jsp?mod\\_LDCN\\_OA=contiene&componi\\_OA=AND&apply=true&LDCN\\_OA=Basilica+di+S.+Croce+in+Gerusalemme&decorator=layout\\_S2&tipo\\_ricerca=avanzata&ordine\\_OA=rilevanza&percorso\\_ricerca=OA&pagina=3](http://catalogo.fondazionezeri.unibo.it/ricerca.jsp?mod_LDCN_OA=contiene&componi_OA=AND&apply=true&LDCN_OA=Basilica+di+S.+Croce+in+Gerusalemme&decorator=layout_S2&tipo_ricerca=avanzata&ordine_OA=rilevanza&percorso_ricerca=OA&pagina=3) [Accessed 9 January 2016].

**Table 31: Sicily: Mosaicists who worked in the area between 1270 and 1529 in chronological order**

Sicily	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Oddo, Maso (Tommaso)	1495 1503	Duomo, Monreale	Sacristy and throughout (initially alone then with son, Pietro)	Repair			Sicily?	987 988
Oddo, Pietro	1506  1512 1535	Palatine Chapel, Palermo Duomo, Monreale	Portico  Sacristy and throughout (initially with father Maso).	Original  Repair	Old Testament scenes		Sicily	989  990 991

<sup>987</sup> Demus, *The Mosaics of Norman Sicily*, p. 108.

<sup>988</sup> Millunzi, *Il Mosaicista Maestro Pietro Oddo, Ossia Restauri e Restauratori del Duomo di Monreale, Secolo XVI*, p. 16..

<sup>989</sup> Demus, *The Mosaics of Norman Sicily*, p. 32.

<sup>990</sup> Ibid. p. 32.

<sup>991</sup> Millunzi, *Il Mosaicista Maestro Pietro Oddo, Ossia Restauri e Restauratori del Duomo di Monreale, Secolo XVI*, p. 16.



Table 32: Siena: Mosaicists who worked in the city between 1270 and 1529 in chronological order

Siena	1270-1329	1330-1449	1450-1529
-------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Ser Memmo, Michele di	1358	Duomo	Facade	Original	Angel (Michael)			992
Ghirlandaio, Davide (Bigordi)	1493	Duomo	Facade	Repair?	?	Painter – St Lucy and a donor in S Maria Novella, Florence – often with brother Domenico. Mosaic in Orvieto (Duomo), Florence (Duomo, Santissima Annunziata and Palazzo Vecchio). Pisa Duomo. Intarsia work in Duomo, Florence and Fiesole Curia Vescovile.	Florence b, 1452 d, 1525	993 994  995 996 997 998

<sup>992</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, pp. 248-249.

<sup>993</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, p. 166.

<sup>994</sup> Gerald S Davies, *Ghirlandaio*, 2<sup>nd</sup> ed. (London: Methuen, 1908), p. 132.

<sup>995</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 469.

<sup>996</sup> Harding, *Facade Mosaics of the Dugento and Trecento in Tuscany, Umbria and Lazio*, p. 255.

<sup>997</sup> 'Domenico Ghirlandaio', [Accessed 9 January 2016].

<sup>998</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 159, 160 and 324.

Siena	1270-1329	1330-1449	1450-1529
-------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Ghirlandaio, Domenico		Duomo	Facade	Repair	?	Painter: frescoes: many works in Florence (Santa Maria Novella and Saint Jerome in Ognisanti), Rome (Sistine Chapel) and Tuscany, Lucca and Pisa. Stained glass in Santa Maria Novella and Santa Maria Maddalena dei Pazzi, Florence and Santa Maria del Carceri, Prato. Manuscript illumination in the Vatican. Metalwork in the Duomo, Florence - four candelabra.	Florence b, 1449 d, 1494	<sup>999</sup> <sup>1000</sup>

<sup>999</sup> Fusco and Corti, *Lorenzo de' Medici*, p. 137.

<sup>1000</sup> Cadogan, *Domenico Ghirlandaio: Artist and Artisan*, pp. 325, 326.

**Table 33: Southern Italy: Mosaicists who worked in the area between 1270 and 1529 in chronological order**

Southern Italy	1270-1329	1330-1449	1450-1529
----------------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Lello, da Roma (or de Urbe) (also called Lellus)	1322? Disputed Possibly 1313?	Duomo, Naples	Apse. Capella Santa Restituta	Original	Virgin enthroned	Painter: fresco cycle in Sant Agnese fuori la Mura, Rome, frescoes in Chapel of Saint Paul de Humbertis, Duomo Naples and with Roberto d'Angio in S Chiara, Naples		<sup>1001</sup> <sup>1002</sup>

**Note:** the mosaicists who made the mosaics in the Duomo of Agnani, the Duomo of Amalfi and the Duomo of Salerno (San Matteo) are not known.

<sup>1001</sup> Baedeker, *Southern Italy and Sicily*, p. 328.

<sup>1002</sup> D'Alberto, 'Arte come Strumento di Propaganda: Il mosaico di Santa Maria del Principio nel Duomo di Napoli', pp. 105-123

Table 34: Venice: Mosaicists who worked in the city between 1270 and 1529 in chronological order

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
<i>Workshop "Second of the atrium"</i>	1270	San Marco	Cupola (Moses)	Original	Old Testament scenes and Prophets, Christ and Apostolic saints.			1003
Number of individual mosaicists unknown	1280 1270 1280		Chapel (Zen) – vault					1004
<i>Workshop "active late 13<sup>th</sup> to early 14<sup>th</sup> C"</i>	Late 13 <sup>th</sup> early 14 <sup>th</sup> C	San Marco	Chapel (Zen)	Original	Christ and Prophets.			1005
Number of individual mosaicists unknown								
<i>Workshop of Saint Isidore's Chapel</i>	Mid 14 <sup>th</sup> C	San Marco	Chapel (San Isidore) – vault and lunettes	Originals	Scenes of local saint and Christ and Apostolic saints.			1006
Number of individual mosaicists unknown								

<sup>1003</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 175-177.

<sup>1004</sup> Ibid. p. 182.

<sup>1005</sup> Ibid. p. 180.

<sup>1006</sup> Ibid. pp. 193-196.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
<i>Workshop of the Baptistery</i> Number of individual mosaicists unknown	Mid 14 <sup>th</sup> C	San Marco	Baptistery –vault, walls, domes and lunettes	Originals	Old Testament scenes, Fathers of the Church, local saints, Christ, Apostolic saints, church symbols and S. John Baptist.			1007
Uccello, Paolo (Paolo di Dona)	15 <sup>th</sup> C 1425	San Marco	Baptistery – vault, walls Facade (destroyed)	Originals Original	Apostolic saint	Cartoons for round glass windows, Duomo, Florence. Painter – frescoes – Santa Maria Novella and San Miniato al Monte, Florence. Mosaic in Church of San Marco, Florence.	Prato, Tuscany b, 1397 d, 1475	1008 1009 1010 1011 1012
Mosaico, Jacopo del	1433 1442	San Marco	Chapel (Mascoli) – vault, wall	Originals	Virgin			1013

<sup>1007</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 183-192.

<sup>1008</sup> Ibid. p. 184.

<sup>1009</sup> Parronchi, *Paolo Uccello*, pp. 2, 13.

<sup>1010</sup> Salmi, *Paolo Uccello, Andrea del Castagno, Domenico Veneziano*, illustrations 24, 25.

<sup>1011</sup> Parronchi, *Paolo Uccello*, p. 1.

<sup>1012</sup> Salmi, *Paolo Uccello, Andrea del Castagno, Domenico Veneziano*, pp. 199, 200.

<sup>1013</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 243.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Giambono, Michele	1433	San Marco	Chapel (Mascoli)- vault, wall (with Venetian craftsmen)	Originals	Virgin	Also worked on the cartoons (the visitation). Painter – St Chrysogonus on Horseback. Fresco in Sant’Anastasia (1432), Verona. Also worked in Treviso and Friuli.	Venice b, 1400 d, 1462	<sup>1014</sup>
	1442							<sup>1015</sup>
	1451		Chapel (Mascoli) – vault, wall	Originals	Virgin, local saints and Prophets			<sup>1016</sup> <sup>1017</sup>  <sup>1018</sup> <sup>1019</sup>

<sup>1014</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 187.

<sup>1015</sup> Parronchi, *Paolo Uccello*, p. 14.

<sup>1016</sup> Demus, *Byzantine Mosaic Decoration. Aspects of Monumental Art in Byzantium*, p. 6.

<sup>1017</sup> Michelangelo Muraro, 'The Statutes of the Venetian Arti and the Mosaics of the Mascoli Chapel', *The Art Bulletin*, Vol. 43, No. 4, 1961, pp. 263-274.

<sup>1018</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, pp. 197, 199.

<sup>1019</sup> Ibid. pp. 197, 199.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Castagno, Andrea del	1443	San Marco	Chapel (Mascoli)	Original		Also worked on the cartoons. Painter – frescos, the Last Supper, Sant' Apollonia, Florence, fresco in Villa Carducci, Florence, S. Zaccharia, Venice. Designed the stained glass windows in the dome of the Duomo, Florence (1444).	Castagno, near Florence b, 1419 d, 1457	<sup>1020</sup>
	1451							<sup>1021</sup>
	?	S. Maria Nuova	Lunette above doorway (transferred to S. Theodoro in 19 <sup>th</sup> C)					<sup>1022</sup>
								<sup>1023</sup>
								<sup>1024</sup>
								<sup>1025</sup>
								<sup>1026</sup>
Bianchini, Francesco	1440s	San Marco	Main body of church (with brother Valerio)	Original	Virgin (lineage)			<sup>1027</sup>
Bianchini, Valerio	1440s	San Marco	Main body of church (with brother Francesco)	Original	Virgin (lineage)			<sup>1028</sup>

<sup>1020</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 243.

<sup>1021</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 6.

<sup>1022</sup> Hartt, 'The Earliest Works of Andrea del Castagno', p. 231.

<sup>1023</sup> Berenson, *Italian Pictures of the Renaissance*, Vol. 2, p. 47.

<sup>1024</sup> George Martin Richler, *Andrea del Castagno* (Chicago: University of Chicago Press, 1943), p. 9.

<sup>1025</sup> John R Spencer, *Andrea del Castagno and his Patrons* (Durham and London: Duke University Press, 1991), p. 72.

<sup>1026</sup> Horster, *Andrea del Castagno*, p. 178.

<sup>1027</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 8.

<sup>1028</sup> Ibid. p. 8.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Bellini, Jacopo	Mid 15 <sup>th</sup> C		Chapel (Mascoli) - wall, vault.	Originals		Probably did cartoons In Mascoli chapel Painter – Renaissance style.	Venice b, 1396 d, 1470	<sup>1029</sup>
Jacopo, Antonio di	Mid 15 <sup>th</sup> C		Dome (Saint Leonard) – main body of church, vault	Original	Local saints	Painter– Master of Pratovecchio? Pupil of Andrea del Castagno.	Prato? Florence? b, 1427 d, 1454	<sup>1030</sup>
	Mid 15 <sup>th</sup> C		Chapel (Mascoli) – vault (with Silvestro di Pietro)	Original	Virgin			<sup>1031</sup>
	Mid 15 <sup>th</sup> C		Main body of Church, arch	Original				<sup>1032</sup>
Silvestro, Barbeta di Pietro	1458	San Marco	Dome (Saint Leonard) – vault	Original	Local saints			<sup>1033</sup>
								<sup>1034</sup>
	Mid 15 <sup>th</sup> C		Chapel (Mascoli) – vault	Original	Virgin			<sup>1035</sup>
	Mid 15 <sup>th</sup> C		Main body of church, arch	Original				<sup>1036</sup>

<sup>1029</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 243.

<sup>1030</sup> Ibid. p. 96.

<sup>1031</sup> Ibid. p. 197.

<sup>1032</sup> Ibid. p. 243.

<sup>1033</sup> Ibid. p. 96.

<sup>1034</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 6.

<sup>1035</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 197.

<sup>1036</sup> Ibid. p. 243.



Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Silvestro, Barbeta di Pietro	1458	San Marco	Dome (Saint Leonard) – vault	Original	Local saints			<sup>1037</sup>
	Mid 15 <sup>th</sup> C		Chapel (Mascoli) – vault	Original	Virgin			<sup>1038</sup>
	Mid 15 <sup>th</sup> C		Main body of church, arch	Original				<sup>1039</sup>
Tibaldi, Matteo	Mid 15 <sup>th</sup> C		Chapel (Mascoli) - vault	Original				<sup>1040</sup>
Antonio, Master Antonio da Firenze	1458	San Marco	Arch	Original	Local saints	Painter of altarpieces.	Florence	<sup>1041</sup>

<sup>1037</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 96.

<sup>1038</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 6.

<sup>1039</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 197.

<sup>1040</sup> Ibid. p. 243.

<sup>1041</sup> Ibid. p. 243.

<sup>1042</sup> Berenson, *Italian Pictures of the Renaissance*, Vol. 2, Plates 747, 748.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Zorzi, Pietro di (or Piero di Giorgio)	1482	San Marco	Facade (destroyed)	Original	Apostolic saint			1043
	1506		Dome (Ascension)	Original	Old Testament			1044
			Dome (Prophets)	Original	scene			1045
	1509		Chapel (St Clements)	Original	Fathers of the church			1046
	1515		Chapel (Zen) – with son	Original	Other			
Bastiani, Alvise	1516		Vincenzo del Musaico					
	1488	San Marco	Façade (north) - lunette	Original	Local saint	Painter?		1047
	1493							
	Late 15 <sup>th</sup> C		Dome (Saint Leonard) - vault	Re-make				1048
	Late 15 <sup>th</sup> C		Dome (Ascension) - vault	Re-make				1049

<sup>1043</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, pp. 7, 8.

<sup>1044</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 244.

<sup>1045</sup> Ibid. p. 244.

<sup>1046</sup> Ibid. p. 182.

<sup>1047</sup> Ibid. pp. 204, 244.

<sup>1048</sup> Ibid. p. 89.

<sup>1049</sup> Ibid. p. 67.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Bastiani, Vincenzo	End 15 <sup>th</sup> C	San Marco	Dome (Saint Leonard) – vault	Original	Fathers of the church Local saint	Painter?		1050
	End 15 <sup>th</sup> C		Chapel (Saint Peter's Lower	Original				1051
	Early 16 <sup>th</sup> C		Choir - vault	Original				1052
	1512		Dome (Saint Leonard) - walls	Original				1053
Novello, Grisogono (Crisogono)	1507	San Marco	Dome (Ascension) - vault	Original	Apostolic saint			1054 1055
Novello, Grisogono (Crisogono)	Early 16 <sup>th</sup> C	San Salvador	Apse	Original	Other (chalice with two figures)			1056
Pietro	1509	San Marco	Dome (Saint Leonard) – vault (signed Petrus)	Original	Virgin			1057
Vincenzo del Musaico	1515 1516		Chapel (Zen) – with father Pietro de Zorzi					1058

<sup>1050</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 89.

<sup>1051</sup> Ibid. p. 244.

<sup>1052</sup> Ibid. p. 37.

<sup>1053</sup> Ibid. p. 86.

<sup>1054</sup> Ibid. p. 61.

<sup>1055</sup> Ibid. p. 65.

<sup>1056</sup> Author's fieldwork: label in church.

<sup>1057</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, pp. 7 - 8.

<sup>1058</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 182.

Venice	1270-1329	1330-1449	1450-1529
--------	-----------	-----------	-----------

Mosaicist	Approx. date	Building	Position of mosaic	Original or repair	Subject matter of mosaic	Work in other cities/media	Place of birth	Ref.
Rizzo, Marco Luciano	1524 1530	San Marco	Sacristy – vault, lunette, wall (with Alberto Zio Prete and Francesco Zuccato)	Originals	Christ, Prophets, Apostolic saints and other			1059 1060 1061
Zio, Alberto (Prete)	1524 1530	San Marco	Sacristy – vault, lunettes, wall (with Marco Luciano Rizzo and Francesco Zuccato)	Originals	Christ, Prophets, Apostolic saints and other			1062 1063
Zuccato, Francesco	1524 1530	San Marco	Sacristy – vault, lunettes, wall (with Alberto Zio Prete and Marco Luciano Rizzo)	Originals	Christ, Prophets, Apostolic saints and other			1064 1065 1066
Zuccato, Valerio	1532 1535	San Marco	Cupola (Creation) – lunette Cupola (Joseph) – arch (intrados)	Original Original	Local saint Local saint			1067 1068
Oddo, Pietro	?	San Marco?				Master mosaicist	Sicily	1069

<sup>1059</sup> Caravaggi, *The Patriarchal Basilica in Venice, San Marco, The Mosaics, The Inscriptions, The Pala d'Oro*, p. 200.

<sup>1060</sup> Ibid. p. 202.

<sup>1061</sup> Ibid. p. 203.

<sup>1062</sup> Ibid. p. 200.

<sup>1063</sup> Ibid. p. 202.

<sup>1064</sup> Ibid. p. 200.

<sup>1065</sup> Ibid. p. 202.

<sup>1066</sup> Ibid. p. 203.

<sup>1067</sup> Ibid. p. 146.

<sup>1068</sup> Ibid. p. 169.

<sup>1069</sup> Demus, *The Mosaics of Norman Sicily*, p. 32.

**Table 35: Other possible Mosaicists of the late Thirteenth Century to early Sixteenth Century (in alphabetical order)**

Name	Birth place	Location of mosaic/town	Building and position of mosaic	Original	Repair	Date	Work in other medium/town/date	Ref
Everso Paolo		Orvieto	Duomo: supplied golden glass.					1070
Giunta, Consiglio di		Orvieto	Duomo:					1071
Guglielmo, Donnino di, da Firenze	Florence	Orvieto	Duomo:				Sent to Venice to buy glass.	1072
Marchi, Perrucciolo		Orvieto	Duomo:				Sent to buy the blue tesserae.	1073
Martino		Florence	Duomo: Coronation of the Virgin mosaic – cleaned mosaic and made lime		cleaned mosaic	1433		1074
Monteleone, Nuto da	Monteleone	Orvieto	Duomo: made silver and gold tesserae.					1075
Zuccato, Sebastiano		Venice	San Marco:	?		?		1076

<sup>1070</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 464.

<sup>1071</sup> Ibid. p. 465.

<sup>1072</sup> Ibid. p. 465.

<sup>1073</sup> Ibid. p. 465.

<sup>1074</sup> "'Document o0204013.056a', *Opera di Santa Maria del Fiore*, <http://archivio.operaduomo.fi.it/cupola/ENG/HTML/S027/C110/T001/TBLOCK00.HTM> [Accessed 9 January 2016].

<sup>1075</sup> Fumi, *Statuti e Regesti dell'Opera di Santa Maria di Orvieto. Il Duomo di Orvieto e i suoi Restauri*, p. 464.

<sup>1076</sup> Demus, *The Mosaic Decoration of San Marco, Venice*, p. 8.

### Appendix 3: Iconography of mosaics: arranged and coloured by subject of mosaic

#### Key:

Yellow = Christ.

Red = Virgin and Christ.

Blue = Virgin.

Brown = St. John the Baptist.

White = Other.

NN = Non-narrative.

N/NT = Narrative, New Testament.

NN/NT = Non-narrative, New Testament.

N/OT = Narrative, Old Testament,

NN/OT = Non-narrative, Old Testament.

**Table 36: Period 1270-1329**

Type	Subject matter of mosaic	City	Building mosaic installed	Position of mosaic	Date installed
NN	Christ, angels and saints	Rome	Sancta Sanctorum	Apse	1300
NN	Christ (enthroned with four rivers)	Lucca	Cathedral	Apse	Early 14th C
NN	Christ	Rome	Santa Maria Maggiore	Façade	1306-1308
NN	Christ and disciples	Rome	San Pietro	Façade	1298
NN	Christ and angels	Rome	San Giovanni	Façade	1290s
N/NT	Scenes from Life of Christ	Florence	Baptistery of San Giovanni	Vault tiers 4,5,6	1280-1300
NN	Christ (Blessing)	Florence	Baptistery of San Giovanni	Vault 3rd/4th tier	1270-1275
NN	Christ and saints (busts)	Florence	Baptistery of San Giovanni	Chancel/Triumphal Arch	1265-1275
NN/NT	Christ and prophets	Venice	San Marco	Niches Zen Chapel	Late 13th/early 14th C

Type	Subject matter of mosaic	City	Building mosaic installed	Position of mosaic	Date installed
NN	Virgin, Christ Child and saints	Rome	Santa Maria Maggiore	External Apse	1284
NN	Virgin, Christ Child and saints	Rome	San Crisogono	Apse	Late 13th C
NN	Virgin, Christ Child and saints (and 2 Queens)	Palermo	Cathedral	Apse	1321-1355?
NN	Virgin, Christ Child, saint and bishop	Naples	Cathedral (San Restituta)	Apse	1322
NN	Christ, Virgin, saints and donor (Coronation)	Rome	Santa Maria Maggiore	Apse	1290s
NN	Christ, Virgin, saints and donor	Rome	San Giovanni	Apse	1290s
NN	Christ, Virgin, saints and donor	Florence	San Miniato al Monte	Apse	1295
NN	Christ, Virgin, saints and donors	Palermo	Cathedral	Apse	1321-1355?
NN	Christ, Virgin and saints	Pisa	Cathedral	Apse	1302
NN	Virgin and Christ Child	Rome	Santa Maria Maggiore	Façade	1300
NN	Virgin and Christ Child	Rome	Santa Maria Trastevere	Façade Frieze	12th - 14th C
NN	Christ, Virgin, disciples and angels	Lucca	San Frediano	Façade	Late 13th C?
NN	Christ, Virgin and angels (Coronation)	Florence	Cathedral	Façade interior	Late 13th C
NN	Christ, Virgin, saints and donor	Rome	San Paolo fuori le Mura	Façade	1325
NN	Christ, Virgin and saints	Florence	San Miniato al Monte	Façade	Late 13th C
NN	Virgin, Christ Child and donor	Messina	San Gregorio	?	Second half 13th C
NN	Virgin and Child enthroned	Florence	Baptistery of San Giovanni	Chancel (part)	1260-early 14th C
NN	Virgin and Christ Child	Messina	Samarian fuori le Mura	?	13th C
NN	Virgin and Christ Child	Monreale	Cathedral	?	End 13th/early 14th C

Type	Subject matter of mosaic	City	Building mosaic installed	Position of mosaic	Date installed
NN	Virgin, Christ Child and saints	Rome	Santa Maria Aracoeli	Capella di S Rosa	
NN	Virgin, Christ Child and angels	Rome	Santa Maria Aracoeli	Lunette	1293
NN	Virgin, Christ Child and angels	Palermo	Cathedral	Niche/main porch	Late 13th C?
NN	Virgin, Christ Child, saints and donor	Rome	San Paolo Fuori le Mura	Facade	1325-1330
N/NT	Scenes from the life of the Virgin	Rome	Santa Maria in Trastevere	Apse	1295
N/NT	Scenes from the life of the Virgin	Rome	Santa Maria Maggiore	Apse	1290s
NN	Virgin and angels (Assumption)	Pisa	Cathedral	Apse	First half 14th C
NN	Virgin and angel (God)(Annunciation)	Pisa	Cathedral	Apse	First half 14th C
N/NT	Scenes from the life of the Virgin	Florence	Baptistery of San Giovanni	Vault tier 5	1275-1280
N/NT	Scenes of Life of John the Baptist	Florence	Baptistery of San Giovanni	Vault tiers 5,6	1280-1305
NN	St. John the Baptist (enthroned)	Florence	Baptistery of San Giovanni	Chancel (part)	1260-early 14th C
NN/Other	Inscription	Rome	San Giovanni	Apse?	1291
NN	Saints and donors	Palermo	Cathedral	Apse	1321-1355?
N/Other	Life of St. Francis	Rome	Santa Maria Aracoeli	Façade	1290s
N/Other	Dream of Pope Liberia's	Rome	Santa Maria Maggiore	Façade	1300
NN/Other	Coats of Arms	Anagni	Cathedral	Façade	Early 14th C
Unknown	?	Siena	Cathedral	Façade	Early 14th C
N/NT	Last Judgement (Paradise and Hell)	Florence	Baptistery of San Giovanni	Vault tiers 1,2,3	1260-1270
N/NT	Last Judgement (Paradise and Hell)	Florence	Baptistery of San Giovanni	Tribune	Late 13th C
N/NT	Scenes from the Life of St. Mark	Venice	San Marco	Vault Zen Chapel	1270-1280
N/OT	Scenes from the Life of Moses	Venice	San Marco	Moses cupola	1270-1280
N/OT	Scenes from the Life of Moses (cont.)	Venice	San Marco	Moses cupola (semi-dome)	1270-1280
N/OT	Scenes from Genesis	Florence	Baptistery of San Giovanni	Vault 3rd tier	1270-1290



Type	Subject matter of mosaic	City	Building mosaic installed	Position of mosaic	Date installed
N/OT	Scenes of Life of Joseph	Florence	Baptistery of San Giovanni	Vault 4th tier	1270-1305
N/OT	Scenes from Genesis (cont.)	Florence	Baptistery of San Giovanni	Vault 3rd tier	1280-1290
N/OT	Scenes of Life of Joseph (cont.)	Florence	Baptistery of San Giovanni	Vault 4th tier	1290-1295
NN/Other	Head of Apostle	Messina	S. Maria del Valle	?	14th C?
NN	Saints (various male and female)	Florence	Baptistery of San Giovanni	Gallery/tribune/drums	1300-1310
Unknown	?	Rome	San Lorenzo fuori le Mura	Portico frieze	Late 13th C
Unknown	?	Arezzo	Cathedral	Vault	Early 14th C
NN/OT	Patriarchs	Florence	Baptistery of San Giovanni	Gallery/tribune/drum	1300-1310
NN/OT	Prophets and Patriarchs	Florence	Baptistery of San Giovanni	Chancel (part)	1260-early 14th C
NN/OT	Prophets and Patriarchs	Venice	San Marco	Moses cupola	1270-1280

Table 37: Period 1330-1449

Type	Subject matter of mosaic	City	Building mosaic installed	Position of mosaic	Date installed
NN/NT	Christ - baptism	Orvieto	Cathedral	Façade	1359
NN/NT	Christ and saints	Venice	San Marco	Lunette	Mid 14th C
NN/NT	Christ (Assumption)?	Amalfi	Cathedral	Façade	1348
NN/NT	Christ (bust)	Venice	San Marco	Vault	Mid 14th C
N/NT	Life of Christ	Venice	San Marco	Wall	Mid 14th C
NN/NT	Christ and Apostles	Venice	San Marco	Dome	Mid 14th C
NN/NT	Christ and Angels	Venice	San Marco	Dome	Mid 14th C
NN/NT	Christ crucified	Venice	San Marco	Lunette	Mid 14th C
NN/NT	Virgin and Child	Venice	San Marco	Lunette	Mid 14th C
NN/NT	Virgin's Nativity	Orvieto	Cathedral	Façade	1360
NN/NT	Virgin (Assumption)	Orvieto	Cathedral	Façade	1366
NN/NT	Virgin (Presentation)	Orvieto	Cathedral	Façade	1376

Type	Subject matter of mosaic	City	Building mosaic installed	Position of mosaic	Date installed
NN/NT	Virgin (Marriage)	Orvieto	Cathedral	Façade	?
NN/NT	Virgin (Annunciation)	Orvieto	Cathedral	Façade	?
N/NT	Three Scenes from Life of the Virgin	Venice	San Marco	Vault and walls	1433-1442
NN/NT	Virgin (Presentation)	Siena	Cathedral	Façade	before 1441
N/NT	Scenes from Life of John the Baptist	Venice	San Marco	6 Lunettes	Mid 14 <sup>th</sup> C
Other	Annunciation to Anna	Orvieto	Cathedral	Façade	1365
Other	Four Church Fathers	Orvieto	Cathedral	Façade	1388
Other	Geometric decoration	Orvieto	Cathedral	Façade	1330-1345
Unknown		Siena	Cathedral	Façade (lower)	Mid 14 <sup>th</sup> C
NN/NT	Four Evangelists	Venice	San Marco	Intrados	Mid 14th C
NN/NT	Fathers of the Church	Venice	San Marco	Pendentives	Mid 14th C
NN	Saints	Venice	San Marco	Intrados	Mid 14thC
NN/NT	Fathers of the Church	Venice	San Marco	Pendentives	Mid 14th C
NN/OT	Prophet	Venice	San Marco	Lunette	Mid 14th C
N	17 Scenes of Life of San Isidore	Venice	San Marco	Walls	Mid 14th C
NN/OT	Patriarchs	Florence	Baptistery of San Giovanni	Gallery/tribune/drum	1300-1310
NN/OT	Prophets and Patriarchs	Florence	Baptistery of San Giovanni	Chancel (part)	1260-early 14th C
NN/OT	Prophets and Patriarchs	Venice	San Marco	Moses cupola	1270-1280

Table 38: Period 3: 1450-1529

Type	Subject matter of mosaic	City	Building mosaic installed	Position of mosaic	Date installed
NN/NT	Christ (Resurrection)	Orvieto	Cathedral	Façade	1450
NN/NT	Christ and saints	Rome	Santa Croce	Walls and Vault	1485
NN/NT	Christ	Venice	San Marco	Conch	1506
NN/NT	Christ, Evangelists and Prophets	Venice	San Marco	Vault	1524-1530
NN/NT	Virgin, Child and prophets	Venice	San Marco	Vault	1451
NN/NT	Virgin (Annunciation)	Florence	Cathedral	Lunette	1487
NN/NT	Virgin (Annunciation)	Florence	Cathedral	Lunette	1490
NN/NT	Virgin (Annunciation)	Florence	S.S. Annunziata	Lunette	1504
NN/NT	Virgin (Assumption)	Pisa	Cathedral	Lunette	2nd half 15th C
NN/NT	Virgin (Death)	Venice	San Marco	Vault	Mid 15th C
NN/NT	St. John the Baptist	Pisa	Cathedral	Lunette	2nd half 15th C
Other	Geometric design	Pisa	Cathedral	Lunette	1455?

Type	Subject matter of mosaic	City	Building mosaic installed	Position of mosaic	Date installed
NN/NT	St. Reparata	Pisa	Cathedral	Lunette	2nd half 15th C
NN/OT	Creation of the World	Rome	Santa Maria del Popolo	Vault	1516
N/OT	Old Testament scenes	Palermo	Palatine Chapel	Portico	1506
Other	Floral design	Venice	San Marco	Wall	1451
Other	Abbot and hermit	Venice	San Marco	Intrados	1458
NN	Saints	Venice	San Marco	Intrados	Mid 15th C
NN	Saints	Venice	San Marco	Pendentive	Mid 15th?
NN	Saint	Venice	San Marco	Lunette	end 15th C
NN	Saint	Venice	San Marco	Piers	1507
Other	Seraphim	Venice	San Marco	Pendentive	1509
NN/NT	Fathers of the Church (west)	Venice	San Marco	Piers	1st decade 16th C
NN/NT	Fathers of the Church (east)	Venice	San Marco	Piers	1st decade 16th C
NN/OT	Prophet	Venice	San Marco	Intrados	1st decade 16th C
NN	Saint	Venice	San Marco	Pendentive	1512
Other	Coat of Arms	Venice	San Marco	Wall	1515-1516
Other	Angels	Venice	San Marco	Wall	1517
NN/NT	Apostles	Venice	San Marco	Lunette	1524-1530?
NN	Saints	Venice	San Marco	Vault	1530?
NN	Saint	Venice	San Marco	Niche	1532
Other	Chalice and two figures	Venice	San Salvador	Apse (small)	1523

## Illustrations

### **Plate 1:** Furnace Design

- (i) Illuminated miniature from the manuscript of Hrabanus Maurus, *De Universo* 1023 from the Abbey of Montecassino (Codex 132), Source: Robert J. Charleston, "Glass Furnaces through the Ages", p. 11.
- (ii) Drawing from a late fifteenth century manuscript in the Vatican Library (*Chigi F. VIII 188 f.191*). Source: Robert J. Charleston "Glass Furnaces through the Ages", p. 13.
- (iii) Illustration by Vannoccio Biringuccio, from *Pirotechnia*, Venice, 1540. Source: Robert J. Charleston, "Glass Furnaces through the Ages", p. 14.
- (iv) Partially sectioned view of a glass furnace showing the three parts of the furnace, illustrated by Agricola in *De Re Metallica*, 1556. Source: C. Singer (ed.), "A History of Technology", p. 209.

**Plate 2:** San Miniato al Monte, Florence. Interior showing the apse mosaic by Francesco da Pisa. Date: 1295. Photo: Author, 2013

**Plate 3:** The brick facade with rose window at the Franciscan (Gothic) church of Santa Maria Gloriosa dei Frari, Venice. Date: around 1330. Photo: Author, 2015.

**Plate 4:** Santa Maria Maggiore, Rome. Interior showing the apse mosaic of *The Coronation of the Virgin* with two mendicant saints alongside the apostles. Below, scenes from *The Life of the Virgin*. Both mosaics by Jacopo Torriti. Date: 1295. Photo: Author, 2014.

**Plate 5:** Apse mosaic with the emblema of Christ's bust and showing two mendicant saints alongside the apostles at San Giovanni in Laterano, the cathedral of Rome, by Jacopo Torriti. Date: late 13<sup>th</sup> Century. Photo: Author, 2014.

**Plate 6:** Santa Maria Assumpta, the Cathedral of Pisa. Interior showing the position of the apse mosaic by Francesco da Pisa, Cimabue and Vincino da Pistoia. Date: 1301-1302, and 1321. Photo: Author, 2013.

**Plate 7:** San Miniato al Monte, Florence. Close up of the facade mosaic (mosaicist unknown). Date: late 13<sup>th</sup> Century. Photo: Author, 2013.

**Plate 8:** Mosaic. Facade of San Frediano, Lucca, showing *The Ascension of Christ* by an unknown mosaicist. Date: second half of 13<sup>th</sup> Century: Photo: Author, 2013.

**Plate 9:** Small lunette mosaic above doorway showing Santa Reparata at Santa Maria Assumpta, Pisa Cathedral, by Alesso Baldovinetti. Date: second half 15<sup>th</sup> Century. Photo: Author, 2013.

**Plate 10:** Lunette mosaic above door showing fruits, leaves and ribbons, Santa Maria Assumpta, Pisa Cathedral, mosaicist unknown. Date: 1455? Photo: Author, 2013.

**Plate 11:** *The Annunciation*, mosaic (in poor condition) in a small lunette above external door, Santissima Annunziata, Florence, by Davide Ghirlandaio. Date: 1504. Photo: Author, 2013.

**Plate 12:** Detail of the sculptural lunette above the door on the eastern façade of the Cathedral of Notre Dame, Paris. Date: circa 1210. Photo: from the web site of Notre Dame, Paris

**Plate 13:** Chigi Chapel, Santa Maria del Popolo, Rome. Ceiling mosaic of *The Creation*, designed by Raphael and set by Luigi di Pace. Date: 1516. Photo: Author, 2014.

**Plate 14:** Dome above the baptismal font, Baptistry of San Marco, Venice. Mosaic, *Christ sends the apostles to baptise the Nations* by the Workshop of the Baptistry, showing Christ holding the flag of the Venetian fleet. Date: mid-14<sup>th</sup> century. Photo: Caravaggi, "San Marco, The Mosaics, The Inscriptions, The Pala d'Oro", p. 185.

**Plate 15:** Venetian coin in the Correr Museum, Venice, showing Saint Mark and Andrea Dandolo jointly holding a Paschal candle. Date: mid-14<sup>th</sup> Century. Photo: Author: 2015.

**Plate 16:** Baptistry of San Giovanni, Florence. Part of the bronze Door of Paradise on the northern portal showing contrapposto figures and classical architecture in a French-styled frame in *The Annunciation* by Lorenzo Ghiberti. Date: 1403 – 1424. Photo: Paolucci, "The Baptistry of San Giovanni Florence", Vol. 2 (Photo-Atlas), p. 150.

**Plate 17:** Interior of the Cathedral in Pienza, Tuscany showing a large window in the eastern wall flooding the interior with light, and a plain, colourless style. Date: late 15<sup>th</sup> century. Built for the humanist Pope Pius II by Bernardo Rossellino. Photo: Author, 2014.

**Plate 18:** Small bust of San Zenobius (in mosaic) by Monte di Giovanni (and entered for a competition to select a mosaicist to carry out the decoration of a chapel dedicated to the saint in the cathedral of Florence). Date: 1504. Now in Museo del Opera, Florence. Photo: Author, 2013.

**Plate 19:** Mosaic of San Zenobius, detail, by Monte di Giovanni showing the mosaicist's attempt to portray the countryside surrounding Florence. Date: 1504. Now in Museo del Opera, Florence. Photo: Author, 2013.

**Plate 20:** The Baptistry of San Giovanni, Florence (interior) showing San Zenobius, (the same subject as in Plate 16). Date: 1300 – 1310. Photo: Paolucci, "The Baptistry of San Giovanni", Vol. 2 (Photo-Atlas), p. 396.

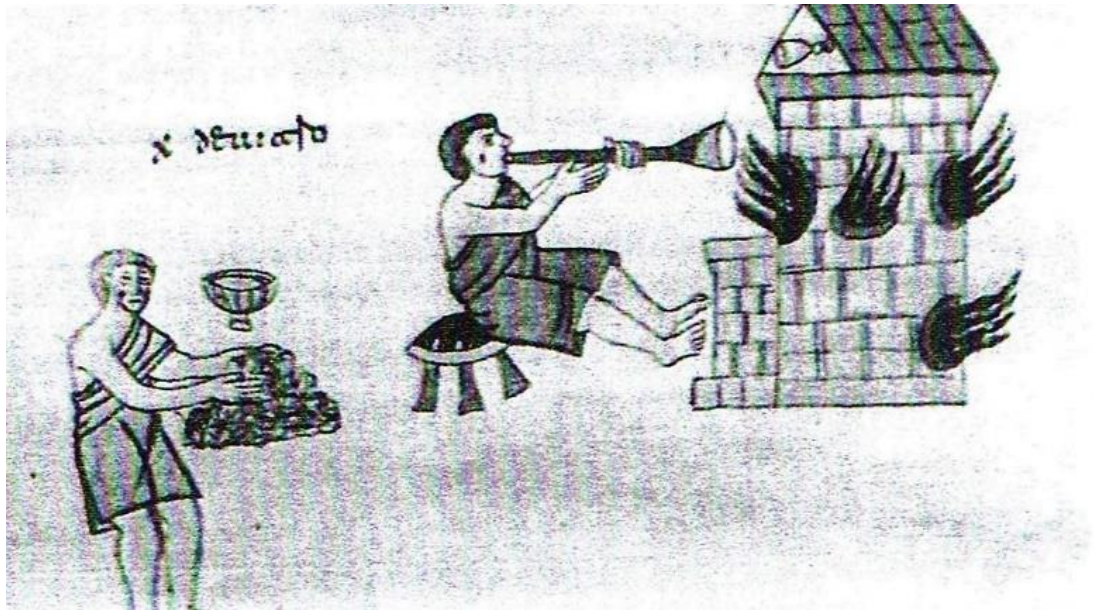
**Plate 21:** One of three ceramic altarpieces in S. Agata, in the village of Radicofani, Tuscany, by the della Robbia workshop using the restrained blue and white colour

combination that was valued during the Renaissance. Date: mid-15<sup>th</sup> Century. Photo: Author, 2013.

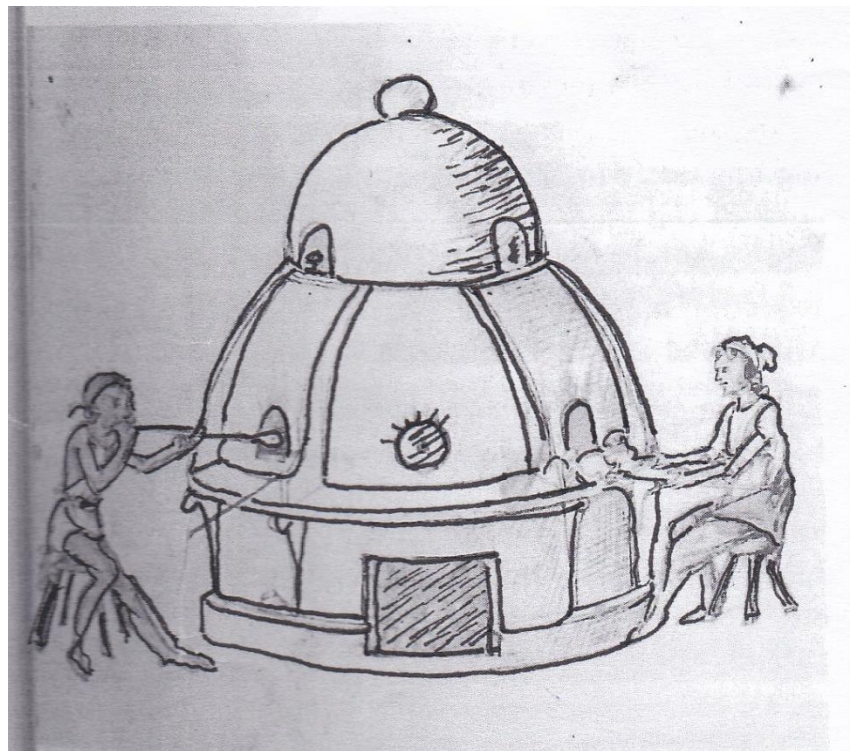
**Plate 22:** Intarsia showing perspective on the choir stalls in San Francesco, Assisi by Domenico Indovini. Date: 1491 -1501. Photo: Magro, "Assisi: History, Art, Spirituality", p. 55.

**Plate 23:** Stained glass window as an alternative to mosaic decoration, now in the Museo del Opera, Siena, by Duccio. Date: 1288. Photo: Author, 2014.

**Plate 24:** Sculptural facade as an alternative to mosaic decoration at Pisa's Cathedral (by Rainaldo). Date: late 13<sup>th</sup> Century. Photo: Author, 2013.



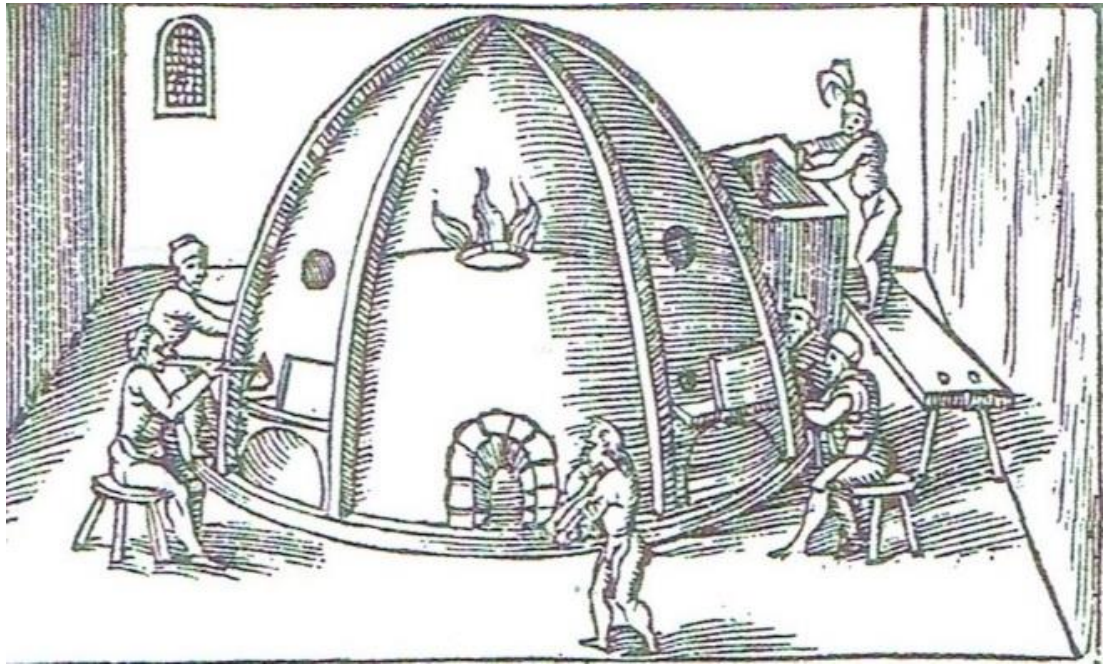
- (i) Illuminated miniature from the manuscript of Hrabanus Maurus, *De Universo* 1023 from the Abbey of Montecassino (Codex 132).  
Source: Robert J. Charleston, "Glass Furnaces through the Ages", p. 11.



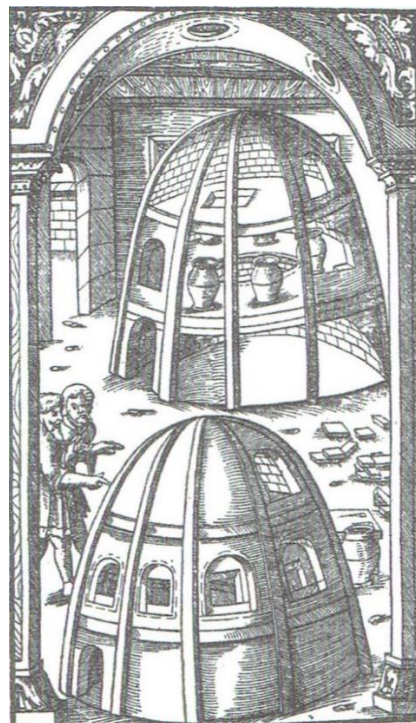
- (ii) Drawing from a late fifteenth century manuscript in the Vatican Library (*Chigi F. VIII 188 f.191*).  
Source: Robert J. Charleston "Glass Furnaces through the Ages", p. 13.

**Plate 1:** Furnace Design





- (iii) Illustration by Vannoccio Biringuccio, from *Pirotechnia*, Venice, 1540.  
Source: Robert J. Charleston, "Glass Furnaces through the Ages", p. 14.



- (iv) Partially sectioned view of a glass furnace showing the three parts of the furnace, illustrated by Agricola in *De Re Metallica*, 1556.  
Source: C. Singer (ed.), "A History of Technology", p. 209.





**Plate 2:** San Miniato al Monte, Florence. Interior showing the apse mosaic by Francesco da Pisa. Date: 1295. Photo: Author, 2013

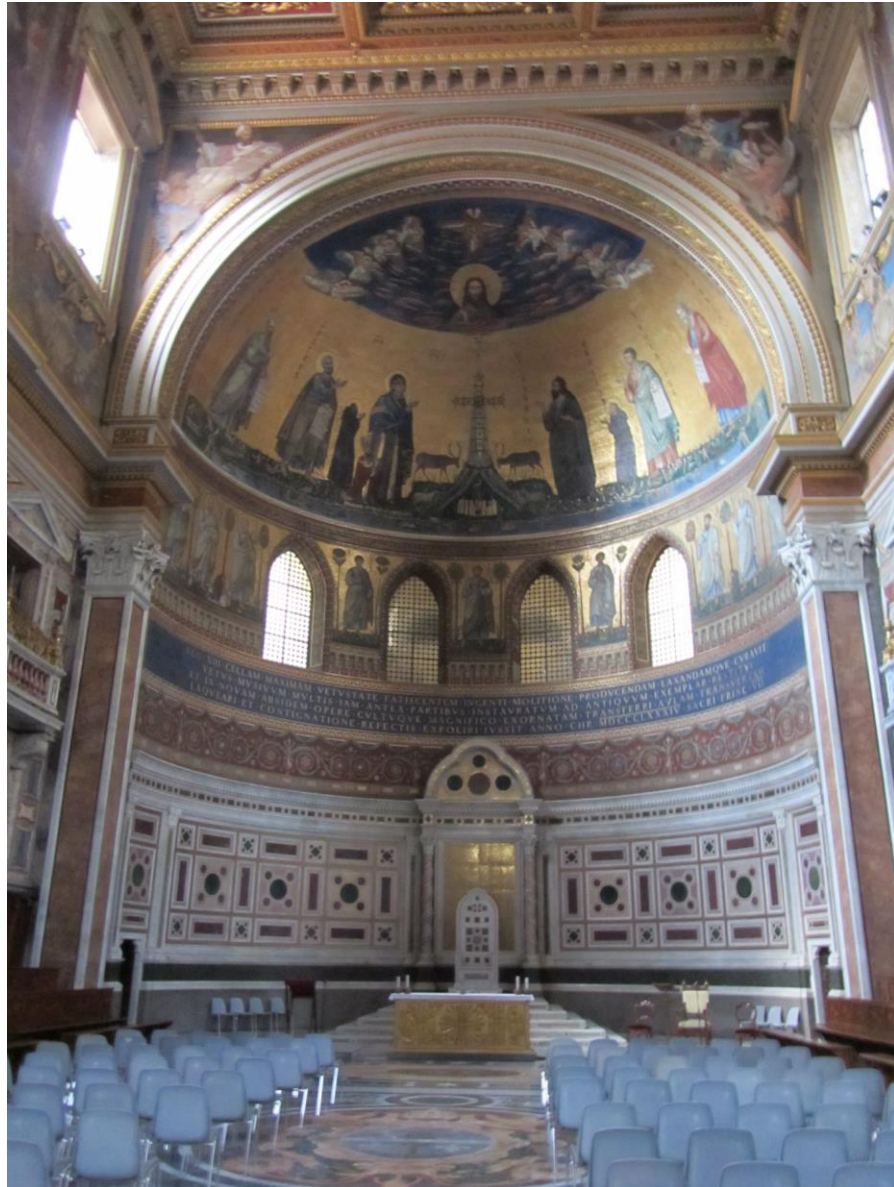


**Plate 3:** The brick facade with rose window at the Franciscan (Gothic) church of Santa Maria Gloriosa dei Frari, Venice. Date: around 1330. Photo: Author, 2015





**Plate 4:** Santa Maria Maggiore, Rome. Interior of the Romanesque building showing the apse mosaic of *The Coronation of the Virgin* with two mendicant saints alongside the apostles. Below, scenes from *The Life of the Virgin*. Both mosaics by Jacopo Torriti. Date: 1295. Photo: Author, 2011.



**Plate 5:** Apse mosaic with the emblem of Christ's bust and showing two mendicant saints alongside the apostles at San Giovanni in Laterano, the cathedral of Rome, by Jacopo Torriti. Date: late 13<sup>th</sup> Century. Photo: Author, 2014.





**Plate 6:** Santa Maria Assumpta, the Cathedral of Pisa. Interior showing the position of the apse mosaic by Francesco da Pisa, Cimabue and Vincino da Pistoia. Date: 1301-1302, and 1321. Photo: Author, 2013.



**Plate 7:** San Miniato al Monte, Florence. Close up of the facade mosaic (mosaicist unknown). Date: late 13<sup>th</sup> Century. Photo: Author, 2013.





**Plate 8:** Mosaic. Facade of San Frediano, Lucca, showing *The Ascension of Christ* by an unknown mosaicist. Date: second half of 13<sup>th</sup> Century: Photo: Author, 2013.



**Plate 9:** Small lunette mosaic above doorway showing Santa Reparata at Santa Maria Assumpta, Pisa Cathedral, by Alesso Baldovinetti. Date: second half 15<sup>th</sup> Century. Photo: Author, 2013.





**Plate 10:** Lunette mosaic above door showing fruits, leaves and ribbons, Santa Maria Assumpta, Pisa Cathedral, mosaicist unknown. Date: 1455? Photo: Author, 2013.



**Plate 11:** *The Annunciation*, mosaic (in poor condition) in a small lunette above external door, Santissima Annunziata, Florence, by Davide Ghirlandaio. Date: 1504. Photo: Author, 2013.



**Plate 12:** Detail of the sculptural lunette above the door on the eastern façade of the Cathedral of Notre Dame, Paris. Date: circa 1210. Photo: from the web site of Notre Dame, Paris,  
<http://www.christianiconography.info/notreDame/dormitionCoronation.html>,  
accessed 23.12.2016.





**Plate 13:** Chigi Chapel, Santa Maria del Popolo, Rome. Ceiling mosaic of *The Creation*, designed by Raphael and set by Luigi di Pace. Date: 1516. Photo: Author, 2014.



**Plate 14:** Dome above the baptismal font, Baptistry of San Marco, Venice. Mosaic, *Christ sends the apostles to baptise the Nations* by the Workshop of the Baptistry, showing Christ holding the flag of the Venetian fleet. Date: mid-14<sup>th</sup> century. Photo: Caravaggi, "San Marco, The Mosaics, The Inscriptions, The Pala d'Oro", p. 185.



**Plate 15:** Venetian coin in the Correr Museum, Venice, showing Saint Mark and Andrea Dandolo jointly holding a Paschal candle. Date: mid-14<sup>th</sup> Century. Photo: Author: 2015.





**Plate 16:** Baptistery of San Giovanni, Florence. Part of the bronze Door of Paradise on the northern portal showing contrapposto figures and classical architecture in a French-styled frame in *The Annunciation* by Lorenzo Ghiberti. Date: 1403 – 1424. Photo: Paolucci, “The Baptistery of San Giovanni Florence”, Vol. 2 (Photo-Atlas), p. 150.



**Plate 17:** Interior of the Cathedral in Pienza, Tuscany showing a large window in the eastern wall flooding the interior with light, and a plain, colourless style. Date: late 15<sup>th</sup> Century. Built for the humanist Pope Pius II by Bernardo Rossellino. Photo: Author: 2014.





**Plate 18:** Small bust of San Zenobius (in mosaic) by Monte di Giovanni (and entered for a competition to select a mosaicist to carry out the decoration of a chapel dedicated to the saint in the cathedral of Florence). Date: 1504. Now in Museo del Opera, Florence. Photo: Author, 2013.





**Plate 19:** Mosaic of San Zenobius, detail, by Monte di Giovanni showing the mosaicist's attempt to portray the countryside surrounding Florence. Date: 1504. Now in Museo del Opera, Florence. Photo: Author, 2013.



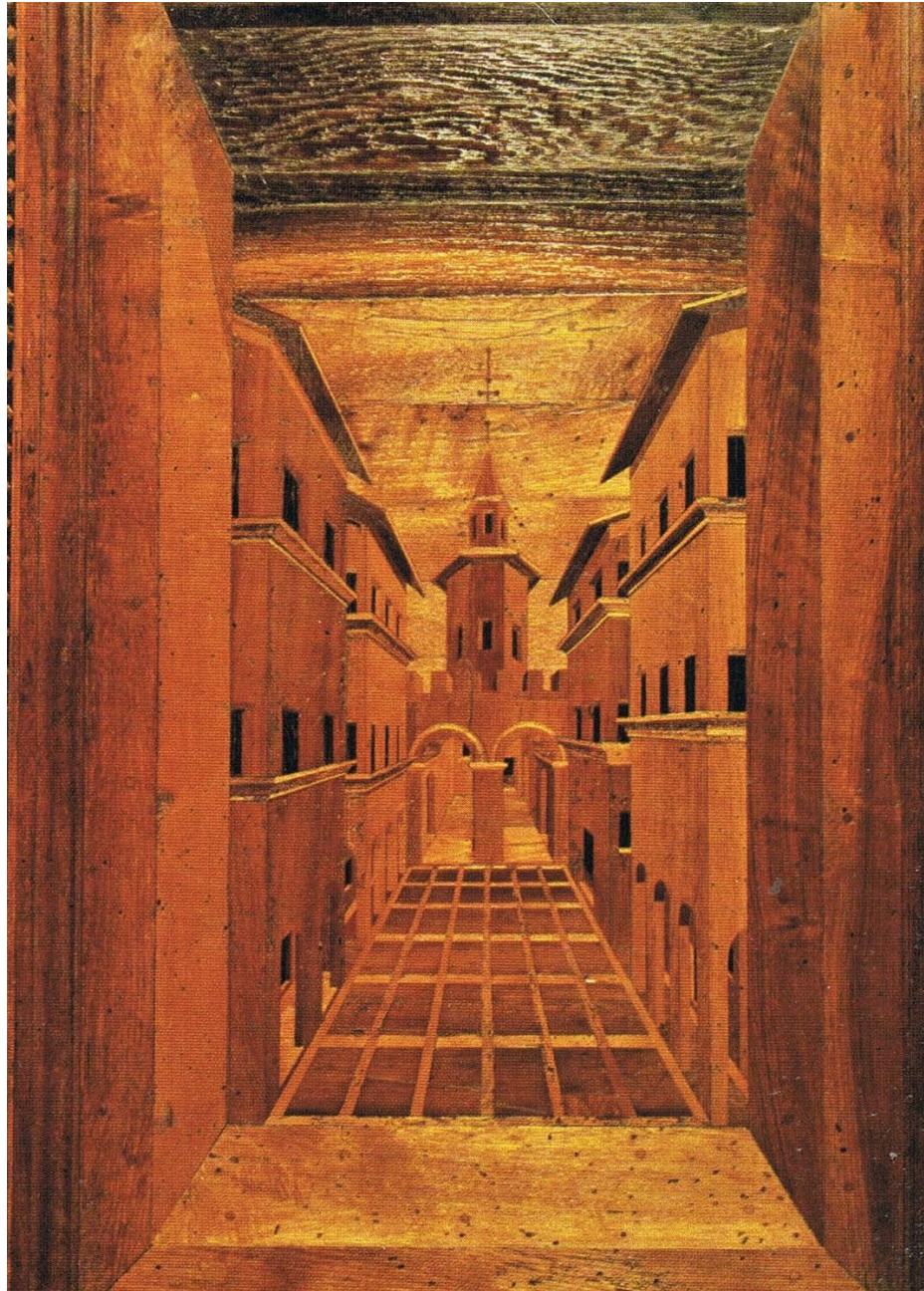


**Plate 20:** The Baptistery of San Giovanni, Florence (interior) showing San Zenobius, (the same subject as in Plate 16). Date: 1300 – 1310. Photo: Paolucci, “The Baptistery of San Giovanni”, Vol. 2 (Photo-Atlas), p. 396.





**Plate 21:** One of three ceramic altarpieces in S. Agata, in the village of Radicofani, Tuscany, by the della Robbia workshop using the restrained blue and white colour combination that was valued during the Renaissance. Date: mid-15<sup>th</sup> Century: Photo: Author, 2013.



**Plate 22:** Intarsia showing perspective on the choir stalls in San Francesco, Assisi by Domenico Indovini. Date: 1491 - 1501. Photo: Magro, "Assisi: History, Art, Spirituality", p. 55.





**Plate 23:** Stained glass for a rose window as an alternative to mosaic decoration, now in the Museo del Opera, Siena, by Duccio. Date: 1288. Photo: Author, 2014.



**Plate 24:** Sculptural facade as an alternative to mosaic decoration at Pisa's Cathedral (by Rainaldo). Date: late 13<sup>th</sup> Century. Photo: Author, 2013.